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1998 CASWE International Institute

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Exploring "Front-Line" Views: Veterans' Perceptions of One Professional Development School after Four Years

Although the Professional Development School (PDS) is promoted as a model by which schools and universities can work together to achieve educational reform, relatively little is known about the impact of PDSs over time, especially on the veteran teachers in PDSs who are expected to experience much of the development and help bring about the reform. This article explores the "front-line" views of 12 veterans involved in developing and maintaining one PDS over four years. Findings reveal that these teachers perceived the PDS to be successful and to lead to their professional development, but not to produce change in their instructional practices. The findings are explored in relation to other research as well as the larger issue of whether PDSs are appropriate vehicles for reform.

Quoique qu'on fasse la promotion de l'Édp—l'École du développement professionnelle—(Professional Development Schools) comme étant un modèle qui permet aux universités et aux écoles de collaborer ensemble afin d'apporter des réformes à l'éducation, peu est connu sur l'impact qu'a l'Édp spécialement sur les enseignants et les enseignantes vétérans qui seront ceux et celles à vivre ce développement en éducation le plus et qui aideront à provoquer la réforme en éducation. Dans cet article, on explore les opinions de 12 vétérans impliqués à développer et à maintenir une Édp pendant une période de quatre ans. Les résultats démontrent que les enseignants et les enseignantes voyaient l'Édp comme étant une réussite et qu'elle favorisait leur développement professionnel, mais qu'elle ne produisait aucun changement dans leurs pratiques professionnelles. Les résultats de cette étude sont explorés en relation aux autres recherches qui ont été faites et, dans un sens plus large, qui questionne si les Édp sont les véhicules appropriés pour entraîner la réforme en éducation.

The Professional Development School (PDS) is promoted in North America as a model by which schools and universities can work together to achieve educational reform (Carnegie Forum on Education and the Economy, 1986; Darling-Hammond, 1994; Holmes Group, 1986, 1990; Winitzky, Stoddart, & O'Keefe, 1992). Driving the movement is a belief that as schools and universities join to design and deliver site-based teacher preparation programs they simul-

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taneously improve preservice education for beginners, enhance professional development for veterans, and lead to reform by redefining teaching and learning across the system. Given the dual focus on better preparation for beginners and enhanced development for veterans, PDSs fit into that category of reform efforts directed at improving teacher quality. But although it has become popular to promote teacher development as a means of reform (Arends, 1990; Cole & Knowles, 1993; Fullan, 1995; Richardson, 1994) and PDSs as vehicles for this (Lieberman & Miller, 1990; Watson, 1994; Zeichner, 1992), it has yet to be determined whether PDSs deliver what they promise. Defining success remains hazy in light of several realities: there are no definitive road maps charting how teacher development links to broader reform (Lieberman, 1996); PDSs cannot be considered separately from the contexts in which they are embedded (Grossman, 1994); and change in education is slow (Sarason, 1990). Such realities highlight the need to investigate PDS experiences and outcomes from the multiple perspectives of those involved in specific contexts over time. To date, however, there has been little longitudinal research in this area and little attention to the impact of long-term involvement, especially on those veteran teachers in PDSs who are expected to experience much of the development and help bring about reform.

This article addresses this gap by focusing on the perceptions of one group of veteran teachers involved in developing and maintaining one PDS over four years. Here we explore these teachers' views on the nature and worth of the PDS and the impact of their extended involvement. A focus on the veterans' views is warranted, for as Spencer (1996) notes, teachers' perspectives and explanations of their views and behaviors are central to understanding their development and their role in reform. This study is part of a larger ongoing investigation, however, and details on other aspects of this PDS are reported elsewhere (Castle, 1993, 1997; Castle & Hunter, 1996).

What follows, first, is an overview of this PDS and the details of this study. Next, the teachers' perceptions are presented and then explored, first in relation to other research and then in relation to key issues emerging from the data.

Context

Background of the PDS

This PDS venture is one component of a partnership between a school board and a faculty of education in southern Ontario. Individuals from both institutions came together in the spring of 1992 to discuss ways of improving their respective programs; the university wanted to enhance its one-year, post-degree preservice program by involving the school board more actively, and the school board wanted to increase professional growth among its teachers and improve instruction in its schools.

One outcome of the meetings was an agreement to pilot a teacher development site where beginners and veterans could interact and learn together. The belief espoused was that both the university and school system would benefit from such a site; the university would have a better teacher preparation program, and the school board would acquire not only better candidates for hire, but also a new cadre of veteran leaders with improved knowledge and skills

gained from working in the site. It was also an expectation that if the pilot proved successful, additional sites would be established throughout the board.

The school board chose a school (K to grade 8) and left it to individuals from the university and school to define the operation. The program was in place by the fall of that year and has now completed its fourth year. Some adjustments to the program have occurred each year, along with some staff changes, but the entire school has remained committed and involved. The two of us have also been with the project from the start, one as a university member coordinating student teachers' experiences, and the other as the board consultant for staff development.

Organization and Operation of the PDS

The emergence of over 200 PDSs in the past decade has resulted in considerable variation in PDS models, many of which differ considerably from what was originally envisaged by the Holmes Group (1986, 1990). Darling-Hammond's (1994) case studies illustrate nicely the range and variety in many American models, whereas Duquette and Cook's (1994) overview of five projects in Ontario explains some Canadian ventures. Given differences in both countries' education systems, differences in their PDS models are not unexpected, especially as teacher education in Canada tends to remain university-based and not move out to the schools. What constitutes a better model remains difficult to determine, however, for "standards for PDS sites are still in the embryo stage" (Metcalf-Turner & Fischetti, 1996, p. 296). Nevertheless, the main characteristics of the PDS in this study must be noted in order to understand the specific context in which these teachers worked.

First, this venture enjoyed both top-down and bottom-up support, a condition identified by Fullan (1993) as essential for success in a collaborative venture. Administrators from both the school board and the university promoted the venture initially, but it was the teachers in the site who agreed to participate and define the operational structure and the extent of their involvement. Unlike many United States models, this project was not connected to any other network or funded by any external agencies, and as such had no pressures to work toward dictates of others outside the PDS site.

It must also be noted that the entire school was involved in defining and developing the program. The details unfolded during meetings at the school between two faculty from the university and the principal and 16 teachers at the school. The university partners asked the teachers to accept a cohort of student teachers (approximately 25) each year and work jointly with the university to improve and extend the students' development in a manner that would also allow the teachers to gain professional development themselves. Both parties agreed that if the program was to amount to more than just an extended practicum in which the university simply deposited students in the school and told teachers what to do and how to do it, considerable ownership had to be taken by the veteran teachers with respect to the content of the PDS program. The two university faculty, themselves former schoolteachers and administrators, were comfortable in the school culture and eager to have teachers direct much of this content. Every teacher participated and was involved in

the decision-making during that first year, and this practice has continued in each of the four years.

The core of the PDS program still consists of three main components in which every teacher participates. The first is the Fall Orientation component, which has the student cohort in the PDS for two days each week for the first 10 weeks to complete specific tasks determined by the school and university. The second is the practicum component, which finds the students in classrooms for at least one of three teaching blocks (each a month long) over the year. The last component consists of extended experiences designed by the veterans to promote specific learnings over the year. For student teachers, one example is attending events with the parent community, whereas for veterans an example is evaluating anecdotal reports of the novices.

In this framework the opportunities available for the professional development of the veteran teachers remain varied. First, the veterans serve as mentors, a number of them mentoring two students at once. In practice this has amounted to having the student(s) in class for the Fall component and a minimum of one practicum block, and also overseeing their experiences over the year. Beyond this, other opportunities for development continue to include attending students' microteaching sessions, presenting workshops for the students, taking part in research and conference presentations with university faculty, serving as guest speakers in university classes, or taking on outside responsibilities such as sitting on teams to hire new teachers. As well, informal opportunity for growth has been available through collaborative planning sessions connected with the PDS and informal conversations in the school.

Details of the Study

Although all teachers in the PDS have been involved in the operation each year, the participants in this study were the 12 veteran teachers who had been at this school over the entire four years. Eleven were classroom teachers whose responsibilities ranged from grades 1 to 8 and one was a general resource teacher working with special needs students.

The main data source was an interview with each of these veterans at the end of the fourth year of the venture. Each interview was conducted by a graduate assistant and lasted from 40 to 65 minutes. The format was semistructured, with open-ended questions followed by probing (Patton, 1980). The questions were designed to facilitate deconstruction and tap progressively higher levels of reflection, from description to analysis to impact to future implications. The questions asked:

- How would you describe this program/operation to others?
- What have emerged as key benefits of this program? For whom?
- Has this program achieved what you felt it would/should? Why?
- With regard to you personally, what specific skills or abilities has this program developed in you over four years?
- How do you feel your involvement has impacted on your own and others' professional practices or behaviors?
- What direction should this program take in the future?

Other data sources used to ensure trustworthiness included four years of field notes taken by the two university members, as well as informal conversations between us and the veteran teachers.

Data analysis was carried out at several levels. To begin, the two of us examined interview transcriptions independently, first to determine what concepts the teachers brought to bear in their responses, then to categorize these, and then to identify themes that emerged. We next met to analyze our findings and negotiate categories and themes. Following this we consulted field notes and then the teachers themselves to ensure that our collective interpretation adequately represented the data. Finally, we revisited our interpretations using the literature on PDSs and school reform to help us reconceptualize PDS outcomes.

Teachers' Perceptions

During analysis, the responses fell into four categories: the nature and purpose of the PDS; the benefits of the PDS; the PDS impact on professional development/practice; and the future of the PDS. Within and across these, shared views emerged, several of which were conflicting. We summarize these here and use quotes to illustrate the teachers' thinking.

Nature and Purpose of the PDS

The responses in this category were varied, with veterans focusing on somewhat different aspects in their attempts to characterize the PDS. Their views emerged most clearly in their responses to the objective question asking them to describe the PDS. Three distinct subgroups emerged here. The first and largest consisted of brief, terse comments:

It's a learning center, a mini-apprenticeship, where student teachers gain important hands-on experience. (Interview 4)

The second subgroup went further in their descriptions to include the developmental nature of the PDS experience and the growth this engendered. One comment illustrates this subgroup's view:

As time passes here, the student teachers change. Their role changes from student learner to teacher learner. And this is the essence of the program—that their growth occurs in their role change. (Interview 2)

The smallest subgroup described the overall program in broader more general terms that emphasized "collaboration":

There's been a partnership here.... The teachers, the student teachers, the university, the staff. Over the four years we've come to know each other, and that allows us to be able to communicate, to talk to one another about the students and their needs and to make decisions together. (Interview 1)

These varied responses spoke to the practitioners' perceptions of what this PDS was about. What emerged was an overall perception of the program as narrow and limited in purpose and scope. After four years, most described the program simply as providing student teachers with school experiences needed to learn to teach. None talked of the program as designed to benefit themselves or the school or the university as well. Some emphasized the collaborative

nature of the PDS, but even here the emphasis was that the collaborative effort was for the betterment of student teachers, not the other PDS partners.

Overall Benefits of the PDS

When reflecting on the overall benefits of the PDS, every teacher readily articulated numerous payoffs. In all cases they named the student teachers, the children, and themselves as benefactors, but then focused on themselves.

You think at first it's the student teachers who benefit. But the children in the classroom benefit too. And I've learned that I myself benefited. I guess I've benefited most of all. It makes me aware of things, makes me more conscious. It makes me review my preparation. At first, the student teachers listen to every word. What you say is really important. So it puts you on your toes. It puts you back on focus. (Interview 6)

When asked later if the program had achieved what they thought it would, every teacher answered an emphatic Yes. When expanding on why the program was successful, however, they accorded little significance to the fact that they themselves had benefited; what mattered was that the program had provided student teachers with in-school time. As one veteran stated, "To me, the whole point of this program was to give students an opportunity to get into classrooms and get involved ... And that's exactly what the program has done." So despite enthusiastic talk about reaping the greatest benefits themselves, this emerged as a byproduct only, reinforcing the general perception noted above of a venture that was narrow and limited in purpose.

Two teachers in the group did voice views that contrasted with this perception. Both held that the program had achieved more than anticipated; one saw the greatest outcome as recognition; the other as schoolwide change:

What's counted most has been the recognition from others and the recognition by ourselves that we as classroom teachers do have something to offer teacher training and that we can play a key role in it. (Interview 7)

I've noticed how much the school has changed, how much we've changed in our attitudes towards preservice teachers, how even the children's attitudes have changed. We're much more accepting.... We've almost gotten to where we treat the preservice teachers the same as ourselves. (Interview 5)

Although these two responses were in the minority, they nevertheless suggested an increased awareness of how PDSs could lead to unexpected outcomes related to professional development.

PDS Impact on Professional Development and Practice

Responses in this category provided greater insights into the teachers' perceptions of their development. Contrasts came to light here too, this time between their perceptions of the development experienced and its impact on their practices.

When asked what specific skills or abilities they had developed, all quickly identified areas of growth:

My communication skills have improved. And I've found it very satisfying to think that I've had some influence on an adult. I've been teaching children for so many years, but I haven't had much experience teaching adults, and I like that aspect. I've become much better at it. (Interview 4)

I’ve learned to be more decisive in what I expect of student teachers. I’ve learned to approach them more decisively and provide them with the resources they need and then let them follow their own route in approaching a unit or topic. I’ve developed a much greater sense of leadership. (Interview 7)

Because I knew the students were coming, I didn’t want to leave anything to chance, and so my organizational skills have really improved.... And my analytical skills too, for I’ve become good at sitting and talking with students about a topic.... I’m more confident and have figured out how to work with different people. (Interview 10)

It became clear in the teachers’ responses that they had developed an expanded view of themselves and their role. Their talk focused on different skills and abilities, but common to all was a reference to learning to work with adults. They saw the PDS as shifting their role from teacher-of-children to teacher-of-adults, a shift they viewed as professional growth. They believed this expanded view of themselves had taken several years to develop, however, as had their confidence, and they attributed much of this to long-term mentoring.

As mentors we were all frightened because we’d never been involved in teaching adults. It’s quite scary to think of moving student teachers on to be people like us.... Before we just took it for granted that what we do is teach—with kids in front of us. But here we have adults in front of us, trying to discern why we do what we do. And we have those conversations with them at the end of the day and they ask why we did something a certain way. We’ve all been asking a lot more questions of ourselves each year. (Interview 2)

Yet although the veterans talked clearly about their new roles and their new skills, most had difficulty articulating how this impacted on professional practice. Sample responses include:

You grow here and take on new roles. But for me, I don’t think it’s led to a lot of change in my practices—except perhaps I now have a much greater consciousness of what I’m doing and why I’m doing it. (Interview 11)

Am I teaching differently? No, pretty much the same. What I think I’m probably doing now is interacting more on a professional level. I think we’re all talking professionally now, whereas before it may have been just one or two. Now there’s a lot of professional interaction. (Interview 8)

I’m now ready for more risks, more professional activities dealing with adults. When you’re a primary school teacher you’re used to just working with little children and you get in a rut. But now I’m taking on more outside activities like working on hiring committees and all. (Interview 5)

One, I’m keeping my eyes open for inservice sessions I can take. They benefit me in this mentor role because I can turn around and model this to the student teachers. Second, I notice we’re doing some team teaching now in our division. We’re working and planning quite well together now. This program has brought more cohesiveness. (Interview 13)

It became evident from these and similar responses that the changes teachers noted were at the level of personal growth and/or collegial interaction in the school and not at the level of classroom instruction. The teachers did not appear to perceive their development as affecting their teaching; rather, their

role with children appeared to be held separate from their PDS mentor and colleague roles.

Future Directions for the PDS

More time in the classroom for the student teachers so they'd learn more. That's where I'd go. (Interview 3)

Statements like this were made by every veteran when talking about future directions. Clearly, after four years, all felt that this program should continue and should provide student teachers with "more involvement" and "more hands-on experience."

Half of the teachers went further to suggest how the extra involvement might be structured and what new activities might be incorporated. These mostly centered around extending the length of practicum blocks. There was lack of agreement with the current policy which saw students in a mentor's classroom in the fall, but then not necessarily with that same mentor for a practicum block. Teachers spoke to the need to change this to ensure that student teachers returned to the same mentor.

Other mentors requested changes in the Fall component when students were in classrooms two days each week. Here emerged a desire on the part of the teachers to know more about the university program and have more independence in terms of decision-making:

I'd like to see more involvement in terms of connectedness with the theory so that we could better address the points they're taught at the university. (Interview 11)

I see a problem with lesson plans and the training process at the university ... If there has to be a certain format, does it have to be the college telling us what the format is? Can't we as teachers, realizing that our own format works, have the students adapt to ours? This was a big question this year—it needs to be addressed. (Interview 2)

Another shared view included expanding to other sites. All knew that another smaller version of the PDS was being piloted that year at another school, and most wanted to see this continue so that more schools would be PDSs.

We need to take this to more schools. We need to look at what more can be done both within this school and others. We need to provide lots more of what school life is like—more exposure to different areas and programs. (Interview 12)

Overall, an underlying theme of greater things to come emerged with regard to future directions. Veterans spoke of the need to continue the PDS and increase the involvement. A growing sense of professionalism emerged, as did a willingness to take on added roles and responsibilities. This contrasted with earlier comments stressing the importance of learning to teach by just being in classrooms. Those comments had suggested a predominantly technical view of learning to teach, but the later comments about how to improve the program suggested that these same teachers now perceived learning to teach as more than hands-on experience. The fact that they asked for more information on the university program to incorporate into their mentoring spoke to an increased openness about the content of teacher education. A willingness to take on

added roles and urge others to do so also suggested they had internalized these behaviors and now saw PDS responsibilities as part of their workplace culture.

Discussion

The perceptions of these teachers allow for a consideration of PDSs and their outcomes from several vantage points. In this section we revisit the main findings, first in light of previous research and then in light of what they suggest about the worth of PDSs in the reform movement.

Relation to Previous Research

One main finding in this study is that the veterans held a narrow view of the purpose and scope of the PDS. Even after four years, most described it as an arm of the university program only and not as a vehicle for personal development or broader reform.

This finding confirms others on the views of teachers working in school-based reform efforts. Grossman (1994) reports that PDS teachers in the Puget Sound project continued to see preservice education as that program's goal, and that their feelings of being overwhelmed by the changes in that school were reflective of a sense of fragmentation rather than progression toward larger goals. Metcalf-Turner and Fischetti (1996) hold that the changes occurring in many schools pull teachers' attention in too many directions, and consequently, "the PDS agenda becomes secondary, not the prominent reform measure around which the institution develops activities" (p. 296). Fullan (1993) attributes such reactions to several factors: teachers are not used to linking particular programs to larger concepts; they have no time to do so; and the school culture promotes thinking about projects in isolation. Duffy (1994) adds that teachers in PDSs have difficulty seeing their own development as a goal because PDSs lead to nonegalitarian relationships that disempower teachers and leave them thinking that what is important is the university's program. Others affirm that such a perception is often based on reality, given that universities do instigate and direct PDSs, leaving schools seen as needing the "development" (Clark et al., 1996; Fullan, 1995).

Yet although the veterans in this study reported a narrow view of the PDS, findings also reveal that none felt uninvolved, unvalued, or unrewarded. Instead, all talked of reaping great benefits, which suggests that they had come to see the PDS as going beyond something "done to others" to include added dimensions of "personal growth" and "self-understanding" (Clark, 1992). Their general talk about how the PDS experience contributed to their professional development is consistent with the findings of others (Duquette & Cook, 1995), and their specific comments about knowing themselves better, gaining more confidence, and interacting more with colleagues also confirm other findings that PDS involvement affects veterans this way (Grossman, 1994; Lythcott & Schwartz, 1994; Miller & Silvernail, 1994). As well, their talk about developing new skills and taking on new roles reinforces Warren-Little's (1990) findings on the benefits of mentoring, which included increased learning from revealing what you know to others and professional satisfaction from knowing that you helped another. And finally, these teachers' references to the growth following collaboration with fellow teachers are also consistent with others linking continuous learning to a range of collaborative practices such as in-

novative mentoring and peer settings (Beatty & Shaw, 1994) and informal and formal sharing with colleagues (Snyder, 1994).

Beyond this, the data in the present study reveal that these teachers had difficulty identifying how their development affected practice. Their examples of change were largely outside the instructional domain. They talked of increased collegiality and interaction at the school level and beyond, but not of change in classroom instruction. Although Winitsky, Stoddart, and O'Keefe (1992) reported that classroom teaching does not undergo change in PDS sites, there are few such findings, for most research on professional development programs has not studied their effects on classroom teaching (Smylie, 1996). Metcalf-Turner and Fischetti (1996) point out that only recently have school university partnerships such as PDSs come to be characterized by schools' needs to improve student achievement, and this offers one explanation for the lack of research attention to teachers' instructional practices in PDSs.

The teachers' perceptions in this study can also be related to other literature on teachers' entrenched notions of their work and roles. As Cochran-Smith and Lytle (1996) point out, "teaching is primarily defined by what teachers do when they are not with other teachers" (p. 95). This view promotes autonomy on the part of teachers and makes it difficult for them to think of their teaching as a focus of inquiry and change. In this view, teachers are competent, self-sufficient, and rarely have questions they cannot answer about their teaching (Lortie, 1975). The teachers in this study appeared to exhibit this stance and to keep their PDS development separate from their teaching; they isolated their mentor and colleague role from their classroom teacher role.

Relation to Larger Issues

Although the findings in this study are consistent with others, they also raise larger philosophical and political issues related to the nature, role, and worth of PDSs in reform. To us the most significant issue revolves around what reform might mean in education and whether in turn PDSs are really taking reform on board or merely reproducing existing practice. This leads in turn to related questions as to whether and how the domains of teacher development and broader reform can be linked in any coherent manner and what impact time might have on the outcomes.

Camps are already forming around the probability of PDSs achieving reform. One side continues to promote PDSs and identify reform as their *raison d'être* (Holmes Group, 1995). Others such as Fullan (1995) openly state that "the rhetoric outstrips the reality" (p. 3) because PDS efforts are often only confined "projects," not likely to achieve significant reform. Yet few actually define what reform might mean in a specific context or how it might manifest itself along a continuum from no change to significant reform, and how long this might take. We are left to ask, then, what the findings in this study contribute to an understanding of this larger issue. And because PDSs posit that reform is achieved through teacher development, we ask more precisely what the views of the veterans in this PDS contribute.

What strikes us first in this regard is that although these veterans did not perceive their own development even to be a goal of the PDS, they nevertheless talked of experiencing a great deal of development as a consequence of their

PDS involvement. These teachers did not feel they had set out to "be developed," and yet they perceived that significant development had occurred. In our attempt to understand how this occurred, we adopted an explanation offered by Lieberman and McLaughlin (1996). They claim that the success of any collaborative venture results from two factors. First, the teachers perceive that the group to which they belong serves their own goals and not goals specified by others; and second, the teachers provide increased input into the shaping of the program and agenda over time. In the case of this PDS, we suggest that the veteran teachers, without even realizing it, continued each year to take on power and control as well as new roles and behaviors and in so doing also set their own goals and brought about their own professional development. This seemed especially evident to us when we revisited these teachers' talk about the future of the PDS. They were clear about wanting to expand the program and equally clear about the kinds of added experiences that should be included. As well, they were clear about wanting to define their own role and ensure that it included more than simply providing time, space, and resources. Their growing sense of responsibility for the PDS program emerged, and this seemed not only to reflect the growth experienced over four years, but also to hint at the growth that could continue in the future.

We are not saying that the personal, professional development experienced by these teachers equates with reform for, as noted above, we are still struggling with the notion of just what constitutes reform. According to Guskey (1996), however, professional development programs are not serious efforts unless they work with individuals *and* organizations. He stresses that "to see change as only an individual process can make professional development an arduous and uncomfortable personal endeavor" (p. 118); the answer lies in finding "the optimal mix of individual *and* organizational processes that will contribute to success in a particular context" (p. 119). In this framework we are left asking whether and how the teacher development in this PDS could be linked to broader change.

We considered this possible link in the framework of Wideen's (1994) research on one specific school's struggle for change. Wideen holds that the teacher is central to reform and that reform movements must address what matters most to them—what they teach daily. As such, he sees school change as that which improves instruction, and teacher development as that which occurs in the context of school change. Wideen found that three factors drive such change—peer interaction, leadership, and knowledge utilization—and that these are most readily manifested in several ways: how teachers support one another and encourage risk-taking; how they take on new tasks and roles; and how they pursue knowledge and work to use it in their teaching. When we considered these, we concluded that many of these behaviors had been increasing in frequency in this PDS over the four years. We saw these veterans interacting more frequently and supporting one another in their professional roles and work. As well, they were taking risks and showing leadership in ways such as giving workshops, leading seminars, and interviewing new teachers. And some were pursuing new knowledge in such ways as participating in research with us and presenting at conferences. The teachers themselves held it important that they as a group were talking and sharing more openly

and working in teams, all of which are behaviors noted by Little (1992) and Swanson (1995) as significant indicators of a changing culture in a school. Given Elmore's (1995) finding that ideas for reform and/or change in schools are best grounded in changes in teachers' shared norms, knowledge and skills, it appears that the foundation was being laid in this PDS for broader reform. As well, given that the shifts and changes that did occur took four years, it is likely that further changes, especially related to curriculum and classroom instruction, will take much longer.

We see this notion of time as taking on major significance. Our experience has led us to agree with Guskey (1996) that any program with great promise for increasing individual as well as organizational effectiveness will approach change in a gradual and incremental fashion. The data in this study suggest, and our own involvement confirms, that the proposed goals and outcomes in a PDS do not occur simultaneously as the PDS rhetoric suggests, but rather in phases. The veterans in this PDSs clearly experienced professional development, but it took several years before they were aware of their own development. It will probably take several more years before broader instructional, organizational, and structural changes follow in the school and beyond.

We have no guarantee, of course, that the latter stage will automatically follow from the former, for any number of prevailing conditions in any one PDS can interfere and keep this from occurring. But recent guidelines on how development and change can be sustained in schools over time are useful sources for determining how likely it is that PDSs, or at least this PDS, can be an appropriate vehicle for larger reform. First, Lieberman's (1996) notions about the kinds of practices needed to support higher level development seem particularly appropriate. She holds that what teachers need if broader change is to occur are opportunities to discuss, think about and try out new practices through taking on new roles such as mentor or researcher, creating new structures such as decision-making teams, working on new tasks such as analyzing case studies, and creating "cultures of inquiry" in which professional learning is an expected part of the school day. It seems to us these were all clearly opportunities that were, and will continue to be, available to the teachers in the PDS in this study.

Second, Watson's (1994) notions about how to connect professional development to broader change also suggest that PDSs are appropriate vehicles for long-range development and reform. He holds that effective professional development is integrated into the regular school day; is built on a model of inquiry and problem solving; provides opportunities for the exchange of ideas; facilitates the shaping of a shared vision; enhances the development of teamwork; and receives high priority in terms of budget and time. All of these factors except the last were present to a large degree in this PDS and will continue to be in the future. The absence of attention to factors of time and money is not to be overlooked, however, for these are important resources and support. We have discovered that they are not essential to sustaining a program, but we wonder at times what further development could occur if a greater allocation of money and time were made available in this PDS.

Although certain conditions might foster significant development and change in one context, this will not necessarily lead to system-wide reform.

Darling-Hammond and McLaughlin (1995) stress that without significant policy supports and practices aimed at supporting teacher learning, PDS movements in this era will have no overall effect on system-wide change. Sarason (1990) predicts the failure of all reform movements such as these, claiming that over time the culture of schools undercuts the motivation, creativity, and intellectual growth of teachers.

We do not adopt this pessimistic outlook. The front-line perceptions and responses of the veterans in this PDS point out the diverse and important ways in which the PDS experience serves as a powerful venue for teachers' learning and eventual reform. Time appears to be the crucial factor, however. We would argue that the extended involvement of the practitioners in this study promoted their development in a fashion far surpassing traditional fragmented delivery models of development, and that although their personal and professional development has not yet resulted in significant changes in their instructional practices or in the broader operation of the school or system, this will occur over time if the movement is sustained. Given the changes and development that did occur over four years, as well as the positive outlook that the teachers expressed, we are optimistic about the future.

Concluding Comment

Although it is too soon to determine the fate of PDSs, the findings from this study suggest that there is reason to have faith in their potential as vehicles for teacher development and broader reform. Previous efforts to implement PDSs have not always met with success, but there have been enough positive ventures to keep the PDS promise strong (Darling-Hammond, 1994), and we include the PDS in this study among this latter group. The level of development occurring in the veterans in this study has been high, and although it has not in their eyes led to significant change in instruction, it appears that underneath it all these veterans have made great progress toward reform. We argue that time is the important and essential variable here, for PDS outcomes appear to occur in phases, and another phase is yet to come.

We recognize, of course, that our conclusions are suggestive rather than definitive. The value of longitudinal research is clear, because further data are needed to determine the extent to which PDS development really does fall into phased achievement. And we recognize too that ultimately this PDS will not be successful if it does not also attend to development in the other participants (student teachers and university faculty), as well as in the other institution (university). But given the centrality of teachers in the PDS change process, we have limited this exploration to the views of the veteran teachers' only. Attention to teachers' perspectives has all too often been missing in calls for reform, and we believe that any investigation of PDS outcomes should start with the perceptions and viewpoints of those on the front line.

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Encountering Obligation in Qualitative Educational Research: A Postmodern Perspective

Through partial accounts of research projects that recount dilemmas occasioned by encounters with others in qualitative research situations, the authors raise questions about the meaning and shape of obligation in qualitative research. Each of the stories presents questions that point to obligation: situations where codes of conduct for research do not necessarily help resolve ethical concerns and dilemmas. A postmodern-hermeneutic reading of the stories points to at least three themes around which ethics must be considered: the intersubjective and lived quality of research, the irreducibility of particular lives, and the nature of responsibility. The examples of difficulties discussed present possible dimensions of obligation in qualitative research, and as the researchers argue, are difficulties that require deeper thought and consideration, a lived practice that goes beyond theory and codes of conduct.

À partir de comptes rendus partiels provenant de projets de recherche qui racontent des dilemmes occasionnés par des rencontres avec d'autres dans des situations de recherche qualitative, les auteurs s'interrogent sur la signification et l'obligation ou la sorte d'engagement impliqués dans la recherche qualitative. Chacune des histoires présentées soulève des questions qui désignent l'obligation et l'engagement, c'est-à-dire, des situations dans lesquelles les codes de conduite mandatés par la recherche ne s'appliquent vraiment pas à la résolution de dilemmes ou de problèmes d'éthiques. Une lecture herméneutique-postmoderne des histoires suggère au moins trois thèmes qui obligent qu'il y a lieu d'examiner l'éthique: l'intersubjectivité et la qualité du vécu en recherche qualitative, l'irréductibilité de certains vécus particuliers, et la nature même de la responsabilité. Les exemples des difficultés discutées présentent des dimensions possibles de l'obligation ou de responsabilité en recherche qualitative qui, telles que par les chercheurs et les chercheuses, requièrent plus de réflexion et de considération—une pratique vécue au-delà de la théorie et des codes de conduite.

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The Pull of Obligation in Research

"Obligation" is not safe ... ethics cannot make it safe ... Life in general, and the life of obligation in particular, is a rather more difficult, risky business than ethics would allow. (Caputo, 1993, p. 4)

Despite efforts to conduct qualitative educational research under strict ethical guidelines, in the course of conducting research and its reporting, there frequently emerges a surplus of ethical concerns. Such concerns are not necessarily anticipated by research protocols and guidelines. They happen despite conscientiously conducting research according to established norms.

Those of us who engage in qualitative research may—indeed perhaps ought to—expect experiences of ethical doubt. In part this is because qualitative research places us in face-to-face encounters with people in real situations. We become, momentarily at least, parts of conversations that enable the telling of stories that often grow beyond the delimitation of a research plan, no matter how carefully the plan is constructed. Qualitative research presents us with difficult ethical issues, some examples of which are provided below. Such issues stem from the ineffable quality of obligations that emerge through researchers' immersion in particular situations and engagement with particular participants.

In distinguishing the response to obligation from that of the application of formal ethics, Caputo (1993) suggests that "obligation is a feeling, the feeling of being bound" (p. 7). As he notes, etymologically *obligation* comes from the Latin and literally meant "to tie" or "to bind," and came to be used to mean to "make liable" (Ayto, 1990, p. 370). Whereas ethical guidelines or codes may shadow our work once fidelity to those guidelines is formally ensured, obligation tends to continue to hold us more firmly, albeit uncomfortably, in its grasp. And what binds us is not formal guidelines, but real lives and events.

But as Caputo (1993) counsels, it is never quite clear where obligations arise, nor can we necessarily anticipate and control when obligations bind us to a sense of responsibility. Responding to obligation is not a theoretical application of encoded norms. Caputo puts the notion of obligation in evocative terms:

Obligations do not derive from some central source of power. Obligations are strictly local events, sublunary affairs, between us. They are matters of flesh and blood without cosmic import or support. They happen. (p. 227)

Based on our own experiences of conducting research, we argue that *obligation*—not just ethics in a formal sense—poses difficulties for researchers, as others working in the area of qualitative research have acknowledged. For instance, Bogdan and Biklen (1992) have written about researchers' need to "define our responsibility and understand our obligations in context" (p. 53). Other qualitative researchers have also discussed the difficulties of conducting research in terms of obligation to the other and to questions about the nature of representation in research reporting (Brantlinger, 1997; Mortensen & Kirsch, 1996). However, difficult questions persist about the compelling and complex nature of obligations that arise in the practice of qualitative research, and that cannot be simply resolved only through the careful self-reflection of the researcher (Brueggemann, 1996).

Attempting to attend to the voices and demands of those who were participants in our studies—Aboriginal teachers, women returning to university, children in inner-city schools, and students learning to become teachers—brought into question our responsibilities as researchers. Something beyond methodology and ethics troubled us and animated the need and desire for further understanding.

It was first through an informal discussion about our research experiences and then through further reading and discussion that we happened on the notion of obligation. In this article we share some examples of our stories to further raise questions about the nature of obligation in qualitative educational research. But rather than resolving the dilemmas we pose, we attempt to illustrate the difficulties that pull us into obligation. In so doing we wish to make it clear that we are neither demeaning the purpose of ethical guidelines in qualitative research nor suggesting alternative guidelines based on a notion of obligation. Rather, as we attempt to show, obligations are occasioned by the events of research. More specifically, we identify three particular moments in research when obligation is especially likely to take hold: during the process of doing the research when we encounter personally subjects of our research; in writing and representing the lives of others; and in thinking about what purposes our research ought to serve in its dissemination.

Opening our experiences to our own questions and for questioning by others acknowledges that understanding is always on the way, something that happens to us, and not something that is fully under methodological control, as the hermeneutic philosopher Gadamer (1975) has argued. Our encounters with obligation forced us to admit that there are moments when we can no longer be confident that good theory and good method will ensure good actions. Although some people may read this as an example of a descent into the nihilism of postmodernism (Eagleton, 1996), we see it rather as a call to reflect more deeply about the import of our research work and its meaning beyond the borders of strictly academic discourse. In other words, the *post* in postmodern announces a moment of ethical concern (McCance, 1996), when there is demand to think beyond theory and institutionally embedded practices. Obligation signals the demand to give attention to what Borgmann (1992) has termed the “focally real,” that which draws our attention in deeper and fuller ways. Thus obligation may be characterized as a postmodern form of ethics that responds to lived experiences—certainly in ethical ways—but without the sureness that abstracted norms will enable good judgments (Dreyfus & Dreyfus, 1990; Wyschogrod, 1990).

The postmodern moment can be understood as ethical because it is a moment of experience when we must make judgments to guide our action, yet with an awareness that we have no unassailable grounds on which to make those judgments (Marshall, 1992). This is not a theoretically defined moment, but a concrete and lived moment when the life of the other demands obligation and response. And in that moment the researcher cannot hide behind a presumed authority of academic discourse. It is also to admit vulnerability in the face of difficulties that cannot be simply filed away as research problems.

The following brief descriptions of our research experiences are intended to illustrate the difficulties posed by obligations that arise in the course of con-

ducting, writing, and reflecting on the purposes of our research projects. Reflecting on her own story recounted in the next section, Carol caught the nature of this process of dialogue and writing about our research experiences:

People often use the metaphor of the journey to describe the experience of doing qualitative research. When we start out on this journey, it is often with a course that we have charted from ethical and methodological maps. But on this journey, at least as I have experienced it, there are so many moments of realization that the mapped-out routes are different from the paths we eventually find and from the paths we eventually create while on our travels. And when we come back from our journey, the formal accounts of our research—articles, theses or presentations—are like the photographs we might show our friends or colleagues when we return from a trip, or even maps we might draw for those who (as naive as we were before we started out) intend to follow us. But these photographs and maps are not the journey as we experienced it. They say so little about what really happened. There is always so much more to the experience than can be put into words.

The situations we present are only small excerpts from our research experiences, which fall under the broad umbrella of qualitative research. The accounts are offered as an invitation to readers to engage reflectively with dilemmas encountered in qualitative research. The dilemmas happened not in the planning of the research, or its initial conduct, but in the encounter with research subjects and in the decisions related to writing and disseminating research findings. The stories are not intended to illustrate a particular form of obligation, but rather dilemmas that led us to think further about the nature of obligation in research. As such, each story also invites alternative interpretations by readers.

The stories are followed by a further exploration of possible dimensions of obligation that arose from the stories. Although not providing comfort as possible guidelines, the discussion is offered for further inquiry by qualitative researchers working in the postmodern context.

Difficulties and Dilemmas in Research Experiences

David: What are the responsibilities of the researcher in intercultural and interpersonal situations? My research study attempted to highlight the influence of Aboriginal teachers on their pupils, schools, and communities in the northern part of a prairie province in Canada. The participants in the study agreed that other people, particularly non-Aboriginal people, should know their stories. William, one of 36 graduates of an Aboriginal teacher education program who participated in the study, was a teacher at the middle years level in a First Nations band-controlled school in a small northern community inhabited primarily by Aboriginal people. During the interviews I encouraged him to describe his experiences with Aboriginal language and culture and his connectedness to the northern landscape. Our conversations also explored the alienation he experienced at school as a youngster and the exploration of his identity during his time in teacher education. Finally, we talked about the impact he perceived he was making as a teacher in the Aboriginal northern community in which he worked.

A recurring theme in our conversations concerned William's heavy involvement with students in after-hours sports activities. William considered his

strong commitment to out-of-school activities essential to his work as a teacher. However, he felt that his image of a teacher conflicted with the conventional image of the school-based, daytime activity that is usually associated with the role of teacher. And William was often outspoken about his conflict with non-Aboriginal teachers due to his beliefs about teacher roles.

We get paid to work with these kids. We're a big service industry and we should put in a lot more. I mean, it's a very uncaring world out there. It's my philosophy that all teachers should be working with the kids in out-of-school activities. When we bring that uncaring attitude into a northern community like here, it's not a very good message. If I had to build a team I would stay away from those kind of people who don't want to work with kids out of school, and I would evaluate my teachers based on that criteria. I don't think this is racist; it's basically a northern point of view.

William attributed his extensive involvement with children to his northern Aboriginal understanding of what it means to be a teacher. He had some strong things to say about non-Aboriginal teachers with whom he worked:

Sometimes outsiders claim to know more than I do about the north. I said to one person who was putting down some northern kids, "You don't know anything about these kids. You don't know anything about me. I grew up in the north and I am one of these kids, you know. You're talking to one of these kids. I'm no different than these guys. I grew up in the same way in the same kind of house with 15 kids, and sharing a bedroom with five brothers and doing the same kinds of things as these kids. I am one of these kids." The Indians and Metis are my people. So when it comes to issues like education, well, that's the way it should be.

These kinds of criticism, also extended to Aboriginal teachers in his community, raised some troubling questions with respect to my responsibility as a researcher. On the one hand, I had taken on an obligation to tell William's story. On the other hand, I wondered whether I had the right to publish a critical portrayal of other teachers who had not had a say in the study. Moreover, he also had strong things to say about community members, who were generally Aboriginal people, concerning their lack of involvement in the activities of their children.

It's awfully hard to get parents involved. I guess, maybe, part of the problem is a social problem that the community faces. People tend to be more egocentric in meeting their own needs. And in our community, as parents, the older people think, "Well, I want to have fun. I've been working all week. It's my turn to have fun this weekend." So whether they go on a booze binge, or whether they go some place to play bingo or go sit and play poker all night it usually means a lot of, I guess you could say, child neglect.

William raised two sensitive issues related to his work: the relationship between Aboriginal and non-Aboriginal teachers, and the relationship between Aboriginal teachers and Aboriginal parents. I was uncomfortable with the prospect of publicizing, and thus possibly compounding, conflicts that seemed to have interpersonal as well as intercultural dimensions. What initially seemed like a clearcut and positive study became riddled with questions relating to my obligation and that of the research.

In wrestling with these questions, I became aware of the responsibilities involved in the writing and distribution of the stories of the lives of the participants in my study. Several questions began to plague me: Will public accounts like William's add to the prevailing image of "who the problem is," all in the name of "giving voice" to disempowered groups? How can non-Aboriginal teachers use the insights contained in these stories to develop their understandings of cross-cultural education? As a non-Aboriginal researcher, what are my obligations as well as the limits of my responsibilities? How do I publicly exercise my agency in a way that is engaged in the struggle of Aboriginal people, rather than retreating to a passive, objective stance in the tradition of the university scholar?

Nancy: How does a researcher negotiate the difficult relationships between public and private disclosures of the self? Susan, a 31-year-old former national-level competitive athlete, had returned to university to complete her teacher education. She had volunteered to participate in my research study on reentry women in teacher education programs. During our three interview sessions, I often felt that there were dark places in her life at which she only hinted. Sometimes she seemed to invite further exploration, particularly regarding her relationship with her father and the relationship between her parents and the effects of those relationships on her. For instance, when I asked her why she had felt so insecure that she dreaded having anyone watch her play her sport and froze whenever local reporters tried to interview her, she said:

I would say—definitely—my family life. My Dad was an alcoholic and he beat up my Mom and everything through all those years. My Dad was really critical and never encouraged us or supported us or praised us. If anything, you were always stupid or you did something stupid and us children talked like that to each other and I just went inside myself and never thought that I could do anything or I had any intelligence and everything I said was stupid. I wish he wasn't there, ever. I hated him!

For many years Susan had kept to herself, guarding her own and her family's "big secret." "I always kept to myself—even my best friends never knew anything. I didn't trust anyone." By the time she ventured into my study, she felt she had "come a long way in that respect—I'm talking to you, aren't I?" I felt she wanted to pour out a good deal more than she did, but I was afraid to probe for fear of pushing her into dangerous psychological and emotional territory.

The dilemma I faced in my interviews with Susan—and many of the other 15 women who participated in my study of reentry women in teacher education—was how far I should encourage participants to open doors into seemingly dark personal passages through which I would be ill equipped to guide them safely. I was not a psychotherapist. She and her colleagues had volunteered to participate in research interviews about the experiences of being reentry women in teacher education programs, not in explorations of their family lives or personal psyches. On the other hand, I faced the pull of potentially rich data that could contribute meaningfully to understanding reentry women's motives, problems, and progress as they strove to reach their professional and personal goals. I wondered how I could handle such situations so that the interview process could help them by attending to their voices, however

troubled, as well as provide me with important data. Did I get enough of Susan's and others' stories to interpret them fairly in the context of my study? How did emotionally scarring or risky experiences and the deep-seated feelings they evoked in participants affect those women's aspirations and their progress toward becoming teachers? Could the data be ignored in developing an understanding of their becoming teachers? Where was the balance point between my obligations to them and to thorough research?

I encountered many such dilemmas as I sought to honor the obligation I felt to safeguard the well-being of participants while I sought to glean multifaceted depictions of reentry women's journeys toward becoming teachers. I found that there were dilemmas involving conflicting obligations during almost every interview. Each dilemma required an immediate decision. I felt like a tightrope walker with the obligation to get the richest possible data on one end of my balance pole and the obligation to protect participants' psyches on the other end. My responses to those dilemmas always had the potential to tip the balance in directions that would have greater significance than I might imagine for the participants in my study, as well as for my research.

Carol: What are the responsibilities to children's lives beyond our research questions? I looked across the table at Jolene, who was telling me about the time, when she was a very young girl, that she had gone home to find her mother had been beaten and was lying on the floor "all bloody." "What did you do then?" I asked her. "Nothing," she replied in a subdued voice that hinted at the state of shock she must have entered into at the time, "I went to the video arcade and my brother found me there."

What obligations are called forth when we carry out research with children like Jolene? My study had begun as an inquiry into the reading and writing of children who attended a grade 5 inner-city classroom, with a focus on the ways that the teacher and children negotiated directions of the children's literacy.

I had not planned to pry into the private lives of the children who attended this particular classroom. I knew, of course, that we cannot begin to reach a full understanding of children's literacy without knowing more about their family contexts; however, because of my prior experience in this community, I was all too aware of the methodological and ethical problems that would result if I trod too deeply into the family lives of the "hard-core kids." It is not just that there are children living in homes where there is prostitution and substance abuse, and children who are in custody or whose parents are mentally ill or who do not have homes at all, but also that in many local families there is constant relocation, which makes it difficult to establish and maintain communication with them for any reasonable length of time.

But once a study begins, the voices of our participants call for shifts in direction that cannot be foreseen or planned for, but at the same time cannot be ignored. As a young child, Jolene had been abandoned and placed in a group home and then a foster home before being returned to her family. Also, after witnessing a violent domestic dispute in her home, she had undergone the traumatic experience of having to give testimony in court. Then, while the study was in progress, she had experiences with violence and harassment that are not detailed here.

It also seemed that for her, being able to talk about the more mundane details of classroom life and reading and writing (like the obvious enjoyment she had shown in completing an assignment called “My Pet Dinosaur”) provided a brief respite from her worries, as well as reassurance that at least part of her life was normal. But then one Monday I arrived at the classroom to find police officers combing through Jolene’s desk. She had been reported missing the Friday before, and now they were beginning to look for clues. The social workers were also supposedly looking for Jolene, but a whole week went by and they said they could not find her. Then she phoned her teacher from an unknown location and asked if she could come back to school.

It was when she came back that she started talking to me about her experiences—about so many of the things that had happened to her at home and on the streets, such as “falling in love” with a man, who on the basis of her account, was probably a pimp. She seemed to be struggling to avoid the temptation of the streets, and her frequent requests to speak to me in private were a part of the struggle to which she had alluded in the following segment of her journal.

I guess I’m growing too fast. I feel 11 [years old] but on the other hand I feel 10 years old but I don’t know how to act my age and I’m wondering what you did when you felt this [way] but I almost forgot. Did you feel this way? I don’t know what’s happening to my mind. Its concentrating and then not concentrating.

What were my obligations as a researcher? I had not sought Jolene’s stories about her painful experiences for my research, and certainly could not begin to write them fully. But if I whitewashed Jolene and her experiences out of my study, wouldn’t I be contributing to the growing romanticization of inner-city life as it appears in the literature, a romanticization that fails to take into account all the real reasons the children have literacy difficulties? Jolene wanted her story to be told. Yet should I write about such deeply painful and private aspects of children’s lives in a study intended to focus on children’s literacy?

Hans: How can we understand learning to teach beyond theory? My story involves Karen, a student teacher who had become convinced of the importance of reflection in teaching. Reflective practice had been adopted as a central model for teacher education at the institution where she was completing her teacher education program. Although many students were already becoming skeptical of the notion of reflection, and the kinds of products and performances that it required in courses and student teaching programs, Karen took quite seriously the responsibility for becoming a reflective teacher.

My role as an action researcher was to attempt to understand how reflective practice could be introduced and integrated into the teacher education program. Yet the more I began to work with student teachers like Karen, the more the theoretical certainty of reflection was subverted by the particularities of their experiences. I began to feel less confident about the nature of reflective practice in the context of student teaching as I began to listen more carefully to students’ stories.

For example, Karen manifested a thoughtful responsibility to becoming a teacher. Even before beginning her final practicum—eight weeks in a junior high school—her dialogue journal was full of questions and questioning about

teaching approaches, philosophical orientations, and herself, in the sense of weighing possibilities for herself as teacher. She became committed to global education. Her course assignments reflected her interest and desire to create interesting and relevant learning activities for students oriented toward global concerns and issues. As a class project she and another student presented a seminar on avoiding stress in teaching and maintaining a sense of healthy personhood.

Relating her reflective experiences, she attributed her difficulties to being overly reflective. Karen had experienced problems of classroom management in her junior high practicum. Her approach to discipline was guided by strong ideas such as caring and respect. She was leery of being thoughtlessly authoritarian. "Kicking students out of the class," something she found herself doing out of necessity, caused a great deal of disappointment with herself. At the same time, worrying about what the right actions ought to be, weighing those in terms of her own strong normative orientations became almost dysfunctional to her success in the classroom. She wondered about being too reflective and whether that had caused both an overquestioning of herself as teacher and made it difficult to act as a teacher. She noted that other student teachers seemed to be more realistic and accommodated to their situations.

Somebody else might have more confidence in the classroom, and they might not have that orientation toward reflecting, because people have different ways of seeing their reality ... I often meet people who are very realistic in that situation and they don't seem to be as stressed out about things.... perhaps they are not as preoccupied.

Reflection, as Karen had understood it, was primarily a focus on herself as person *and* as teacher and her thinking about the experience of reflection. At the end of her practicum, she wrote, "I feel battered and exhausted from constant self-bereavement and self-doubt and from this exhaustive focus on self."

Karen's story, repeated in other ways, but equally poignantly in the stories of other student teachers, began to rub the sheen off ideas like reflection and reflective practice. I began to see, not fully of course, that the master narrative of teacher education and its attempted shaping of pedagogical practices hid many underlying, perhaps unconscious stories. In Karen's experience such stories were only beginning to surface in the practice of becoming a teacher. Her narrative of becoming a teacher and being a teacher was still incomplete, but nonetheless immanent and imminent in her experiences, past, present, and yet to come.

Student teachers' experiences like those of Karen spilled over, so to speak, the conceptual containers designed to hold them. My research thus brought me face to face with questions of obligation. The real-life experiences of student teachers could neither be described as reflective practice nor ameliorated through the application of reflective practice as a technique of teacher education. Rather, obligations arose to consider the notion of reflection more deeply and differently—especially in terms of the lived experience of those learning to become teachers.

Some Dimensions of Obligation Encountered in Qualitative Research

Through our stories we are trying to own up, as Caputo (1993) cautions, "to the lack of safety by which judging everywhere is beset" (p. 4). The examples we

relate above point to obligations that arose in the process of doing and writing our research projects. These obligations were expressed as particular dilemmas of experience we encountered as researchers and which we are obligated to face. Felt as obligations, these dilemmas arise in the life of the research as particular events, rather than as theoretical problems of research method or problems with respect to the application of formal ethical guidelines. The experiences of research, like those recounted above, do not lend themselves to easy solutions or definitive pronouncements; rather, they are open to the possibility of diverse interpretations. As Caputo puts it,

To affirm the anarchy of events is to enhance a polyarchy that events are indefinitely redescribable, indefinitely reconfigurable, that we lack the perspective from which to pronounce the meaning or pass the final judgment on the sense of events. (p. 221)

Our stories illustrate the uncertainty of obligation that dilemmas in the events of research bring forth. Obligations may be thought of as tensions in which we must necessarily dwell, tensions that call forth thought, dialogue, admission of vulnerability; they open spaces for interpretation and understanding. Thus although there are many ways to interpret the experiences of obligation, we discuss three dimensions that seem particularly to arise in the practice of qualitative research.

Obligation binds us to the practice of qualitative research as a living and intersubjective practice. Qualitative research in the human sciences provides methods for researchers to observe lived experiences and offers ways of constructing or giving meaning to those experiences (van Manen, 1990). Through the process of writing, researchers seek to give shape to experience, often through a process of thematizing. In phenomenological terms, thematization grows out of the rational process of intentionality, which is rooted in the researcher's desire to master meaning in order to provide some degree of certainty, and perhaps even power, over situations and others. Intentionality, accomplished through identifying and thematizing, is the way consciousness imposes meaning on phenomena that present themselves to us. It is a way of ordering the world, but also a way that carries the danger of reducing the complexity and lived quality of that world into conceptual categories. Peperzak (1989) suggests that consciousness "subsumes, gathers, and synchronizes the given multiplicity under a theme" (p. 7).

But to speak to the notion of research as a "living practice" (Carson & Sumara, 1997), we must accept that language is much more than the naming and categorization of phenomena. Language as communication always addresses *someone*. According to the late French philosopher of ethics Levinas (1993), the other to whom I speak or write is not a phenomenon at all. A relation to the other cannot be structured by intentionality and the imposition of meaning. Rather meaning, or the possibility of meaning, depends, indeed resides in, "the total intersubjective transaction" (Usher & Edwards, 1994, p. 70). As Peperzak (1989) puts it, "[in] facing a face that looks at me and in speaking to someone, I separate myself from the identifying and thematizing attitude that is characteristic of a theoretical and technical and even of an aesthetic approach" (p. 12). Before all theorizing, in other words, I must be there for the other person. And the obligation to be there is not simply defined

by my position or institutional responsibility. As researchers, we are called on to respond to that difference and particularity of the other. Obligations are thus real moments of life—focal realities (Borgmann, 1992)—which call for responsible and responsive acts of interpretation.

How does this suggest thinking about qualitative research as a living practice? Certainly in the four stories above it is possible to see, on the one hand, our desire to evoke meaning about the lived experiences of the others. On the other hand, we also wish to resist closure of meaning in themes and concepts and to remain open to how others express meaning and their understandings of their own lives and practices.

This is not necessarily an intentional choice of the researcher. David sees in the stories of Aboriginal teachers elements that go beyond *his* intentions to find and create meaning. They challenge his position and responsibilities as a researcher and his relationships to the Aboriginal community. Nancy, to a certain extent, cannot close off the needs of her participants to explore their own selves by restricting conversations to her research questions. The experiences of reentry women extend beyond the public meaning of their lives and learning. At the same time, encouraging the revelation of private lives could be risky and certainly beyond the bounds of a researcher's mandate and competence.

Carol finds in the research process a proliferation of meanings that transcends her immediate interests in literacy and extends to concern for the harrowing real-life experiences of inner-city children. And Hans' interest in the meaning of reflective practice is exceeded by his student teachers' needs to come to an understanding of self and identity, raising the question of obligation to student teachers beyond that of theoretical interests and understanding.

The obligation to heed the intersubjective quality of research suggests also the problems posed for writing and reporting research. Sometimes that writing can result in a closed text that may be impenetrable for practitioners or non-academics, for example. However, research writing can also demonstrate the openness of the researcher to others. For example, a text may present a multiplicity of stories and interpretations, paying attention to the contradictory and the ineffable (Lather, 1991, 1995; van Manen, 1990). It is necessary, then, to admit that any reporting is always partial, historical, laden with both intent and resistance and respect for the vulnerability of both the researcher and the researched. Our experiences point to the importance of the obligation of conducting and representing qualitative research as a lived and intersubjective practice. As such, there is an obligation both to keep the conversation going and to admit that the products of our research are not definitive announcements, but rather invitations to further inquiry and critical questioning. Thus there is overarching obligation to resist closure in definitive theoretical or prescriptive announcements.

Obligation binds us to a respect for the qualities of particular lives. The particular refers to the qualities of experience of real lives that resist reduction to generalizations and concepts in research. Michelfelder (1989), building on the work of Levinas, writes of a sense of ethical responsibility, "which has to do with the particular, which is an affirmation of the particular over the universal" (p. 53), an obligation, really, to stay open to other or, as Levinas (1993) phrases it, not to let the *saying* be overpowered by the *said*. In our enthusiasm to fix the words of

others in research, even to enhance them with theoretical eloquence, we may indeed lose the meaning and force of those words. As Levinas puts it, “in everyday language we approach our fellow-man [sic] instead of forgetting him [sic] in the ‘enthusiasm of eloquence’” (p. 142).

In the four stories presented above, the voices of others persistently reverberated against the constraints of research agendas and projects, whether the voices were those of Aboriginal teachers, reentry adult women in teacher education programs, inner-city children suffering violence in their lives, or student teachers trying to attain self-understanding.

Listening to the voices of those being researched, what Levinas termed *the saying*—and the ethical demand to keep that alive—rather than the *said*, which is a fixing in written representation, raised into our awareness the irreducibility and complexity of real lives. But it also exposed the instability of our positions as researchers and, equally, the risk for our respondents in making more public their private lives.

Although the purpose of Nancy’s research was to develop an understanding of the experiences women encountered in returning to university later in life, the process of conducting her research also allowed, perhaps even made possible, issues of personal identity and struggle that were indeed critical in the stories of women. The stories were difficult either to deal with or to conceptualize as part of the research question. Nancy’s account raised the question of the extent to which the researcher can deviate from the difficult balancing act she was attempting to maintain as a researcher in the face of the personal struggles disclosed by her participants. Her concern about ignoring urgent particularities of lives, risking the marginalization of real concerns in the interest of more generalized themes or theoretical constructs, illustrates the obligations that happen in face-to-face relationships when research creates the possibilities for more private disclosures of self. David’s encounters with Aboriginal teachers also highlighted the dangers of disclosure and the tensions that telling certain stories have the potential to create in real communities.

The receptivity to particularity is more than just a way of enhancing theoretical understanding. It has practical implications as well. For example, in Carol’s story it very much mattered who the children were and what the contexts of their lives were in order also to make sense of the meaning of literacy. In the way that others’ experiences—inner-city children in this case—sometimes become generalized, even romanticized in educational research literature, the relevance to practice also becomes diminished. Often the product of research is a generalization from particular experiences, and hence may be devoid of voice and context, lessening, as a consequence, its ethical pull on our thinking. Although written in authoritative terms, such research does not speak to the real experiences and needs of teachers or children, which is the locus of lived obligation.

The stories presented above also show that clear lines of demarcation cannot be simply drawn between the private lives of research participants and the public expression of our research. Indeed, to ignore the private dimensions of experience, where particularity is strongest and most intense, is also to risk marginalization and exclusion of certain persons, as both Carol’s and Nancy’s stories showed. It is the particular and privately experienced that is expressed

with intensity and emotion (Brantlinger, 1997; Opie, 1992). Yet how can we attend adequately to this? Where do our responsibilities fall as researchers, committed as we are, on the one hand, to a public disclosure of interpreting and understanding, and on the other, to both protecting and supporting the particular voices of those being researched?

To engage in qualitative research is to be open to the temporality and particularity of lives whose stories we attempt to represent. Yet, for many reasons, the singular qualities of people's lives resist representation in reductionist or generalized forms. There is a danger in qualitative research of ignoring vital differences and looking for similarities to our own ways of thinking and acting (Hargreaves, 1996). At the same time, there is the question of our own lives and responsibilities in institutions that claim to serve those being researched. Our examples of research show that these are dilemmas that resist easy resolution. They oblige us to ethical, interpretive engagements beyond the limits of research reporting.

Obligation binds us to the difficulties of responsibility. As a response to questions of obligation, we may often speak of our responsibility as researchers to speak for marginalized people, or to create a space for their voices. We may characterize our research as something that operates on behalf of marginalized people and that serves to disperse and resist the operations of power. The call of advocacy is a strong one that guides the interests of educational research and its reporting (Brantlinger, 1997; Lather, 1991, 1995).

Researchers have responded to obligations posed by specific research situations by stressing the importance of multivocality and more inclusionary documentary practices. Methods such as narrative inquiry, life history, ethnography, and action research, which are more participatory and intersubjective in quality, have especially responded to the challenge of giving voice to marginalized groups (Hatch & Wisniewski, 1995).

The research projects on which our stories are based exemplify this sense of responsibility to give voice to groups that have tended to be submerged by institutional and political interests. David's research was motivated by the knowledge that although Aboriginal people have been the object of research, we do not often, if at all, hear Aboriginal voices. Similarly, the other stories show that the plight of inner-city children, the complex experiences of adult women in universities, and student teachers struggling with the difficulties of becoming teachers are not given voice in ways that speak the urgency of their experiences and needs.

Yet to raise the specter of postmodern uncertainty again, there is something problematic here about the nature of the researcher and his or her obligations and responsibility. As researchers we could have felt quite satisfied with the direction our research projects took us. We could have been self-congratulatory in terms of the efforts we took to let the other be heard, to give voice to the marginalized. But through our conversations and the writing of this article, we arrived at a greater realization of the limitations and shortcomings of our research in achieving these goals. Nagging questions emerged more strongly about the nature of obligation and responsibility, particularly with respect to the question of who and what announces and owns responsibility and obligation.

Despite our declared openness to others and to difference, and despite our attempts to make the effort to demarginalize, to create space for alternative voices, perhaps it is still we, the researchers, who attempted to control the terms of that obligation and defined the terms of response to it. In other words, we did not necessarily question the origin and authority of obligation and responsibility. As researchers, we still defined the obligation. We defined and shaped the nature and form of our *response ability*. But those responses may still be aimed at universalizing—and hence denying—experiences that cry out in their immediacy and particularity.

In Caputo's (1993) terms, obligation is not planned, although of course we can anticipate that ethical difficulties may arise in the process of research. However, we do not create obligations, nor are they announced by us through our research work. Caputo explains,

Obligation is not like a contract I have signed after having had a chance first to review it carefully and to have consulted my lawyer. It is not anything I have agreed to be a party to. It binds me. It comes over me and binds me. (p. 7)

To think about obligation in Caputo's terms does not provide much comfort for resolving the concerns and questions our stories raise. But perhaps Caputo's questioning of the nature of obligation may help us to problematize the notion of voice and who speaks for whom. Perhaps the issue in the stories of the lives of Aboriginal teachers, in reentry women students, in inner-city children, in those learning to become teachers is not whether to allot voice, a presumptuous idea in any event. It is not we who make this decision, at least not unilaterally. In other words, the issue is not so much the creation of space for voice(s). More important is an acknowledgment of the right for a legitimate reappropriation of space and voice that has been occupied by voices of privilege, authority, and power in the institutions we represent. That is not a space that is simply the researcher's responsibility to occupy, although the question of obligation does not exclude the researcher's responsibility in that space. This is the tension that we have as researchers experienced and with which we continue to struggle.

A postmodern sense of obligation reminds us also that we as researchers are also participants, and that in negotiating the space of research we cannot fully or solely define our responsibilities and obligations, nor relinquish them. As researchers we are not safely above the realities of our participants' lives, but share the sense of insecurity about appropriate actions. Yet we must decide and act in spite of that insecurity, and sometimes beyond narrowly defined institutional responsibilities.

Living with the Difficulties of Obligation in Research

It is not a question of introducing a solution from without, or from above. Life is healed only by life. There is nothing outside life that one can introduce as a remedy or solution to its sorrows, even as there is nothing outside life that grounds it or founds it or gives it a transcendent sense. The wounds of life can be administered only by more life, life pressed against life; life in life, hand in hand, siblings of the same dark night. (Caputo, 1993, p. 244)

Our reflections on obligation are intended to raise questions and discussion with respect to the difficulties of conducting qualitative research. As we under-

stand it, obligation does not lend itself to tidy prescription. Obligation is more experiential and thus more difficult to codify. We may be called on to question, for example, the unsaid and silences, the reasons for exclusion of certain people and their lives, the hierarchies of power assumed in research and institutional practices, the impetus to paper over difference and seek comfort in similarity and like-mindedness and the purposes for which we conduct research in the first place. More concretely, obligation orients us to the demands of real persons and lives, like those presented in our brief accounts of research experiences for which methodologies and protocols of research could not guarantee a solid comfort of ethical certainty. Obligation points to the difficulties of defining the researcher's responsibilities in advance of encountering others in research; along the way, as Caputo (1993) has warned us, "obligation happens."

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Toward Successful Researcher-Teacher Collaboration: Processes and Benefits Involved in Developing a Special Education Project

This study examined major processes and benefits involved in a collaboration between a researcher and six elementary school- teachers for a special education project. Using the participant observation approach, the investigator collected data from dialogues during meetings, informal interactions, and written communications, as well as from formal interviews. The results indicated successful collaboration with benefits for the researchers, teachers, and children. The processes and the benefits of the collaboration are identified and a model for successful researcher-teacher collaboration drawn.

Cette étude examina les processus et les bénéfices majeurs qu'un projet de collaboration entre une chercheuse et six enseignantes qui œuvraient au niveau élémentaire dans le contexte d'un projet d'éducation spéciale. En utilisant l'approche de recherche de l'observation de participant(e)s, la chercheuse a pu collectionner des données à partir de dialogues survenus pendant des réunions, d'interactions informelles, de communiqués écrits, et aussi, d'interviews formelles. Les résultats ont révélé l'existence d'une bonne collaboration fructueuse qui suscitait des bénéfices; pour tous, les chercheur(e)s, les enseignant(e)s et les élèves. Les processus et les bénéfices sont identifiées et un modèle de collaboration entre chercheur(e) et enseignant(e) en est tiré.

Collaboration between universities and public schools is likely to be one of the most prominent parts of the emerging educational reform movement (McDaniel, 1988-1989). As a natural growth of the university's mission (De Bevoise, 1986), university-school collaboration makes research relevant to both (Goodlad, cited in Wilgosh, 1990). Teachers are especially qualified to evaluate the usefulness of research because not only have they first-hand experience with school issues and problems, but they are also consumers of research products (Stevens, Slaton, & Bunney, 1992). As a result, teachers can assume an invaluable role helping to develop, test, and refine theories (Patterson & Stansell, 1987).

Researcher-teacher collaboration, however, is not invariably successful as found in two studies (Cole & Knowles, 1993; Shulhe & Wilson, 1993). Because failure was attributed in part to a faulty process, researchers have suggested examining the collaborative processes and outcomes (McKernan, 1991; Smulyan, 1989). To date, studies of collaborative processes have concentrated on personal and professional relationships (Basaraba & Drake, 1993; Edwards & Craig, 1990; Thomas & White, 1993) rather than on the processes involved in

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developing and implementing research. No researchers have specifically identified processes that link to successful collaboration.

One important process leading to successful collaboration may be initiating the collaboration. Researchers' ignorance of "the crush of school life" (Shulhe & Wilson, 1993, p. 12) was identified as the major cause of an aborted university-school collaborative project. University researchers are thus urged to accommodate the teachers' work load, as teachers are less willing to collaborate if they must bear a heavy burden (Corrigan, 1992). Researchers are also advised to build collaborative programs on teachers' knowledge and what they already do well (Bruneau, Henderson, McCracken, Kimble, & Hawthorne, 1992).

Successful researcher-teacher collaboration may also concern resources, communication, and conflict resolution. Insufficient resources are considered a major pitfall to collaboration (De Bevoise, 1986), and "finding time is always a problem for collaboration" (Brookhart & Loadman, 1992, p. 54). The means to share information efficiently and effectively is also emphasized (Sirotnik, 1988). Moreover, conflict in collaborative work is inevitable (Clark, 1988; Lieberman, 1986) because schools and universities represent two different cultures. Whereas universities endeavor to build theories, schools focus on the practical realities such as the immediate well-being and progress of children (Brookhart & Loadman, 1992). Teachers and researchers also value different kinds of knowledge (Hattrup & Bickel, 1993). This "difference in focus creates different cultural perceptions of what is important" (Brookhart & Loadman, 1992, p. 56).

A still important issue in university-teacher collaboration is the benefit of collaboration. Researchers have suggested that successful collaboration results when mutually satisfying outcomes are identified and achieved (Goodlad, 1988; Sellers, 1988). Thus "the first step in a collaborative project is to appreciate what the rewards are for each side" (De Bevoise, 1986, p. 11). This is also necessary because "school people are not apt to want to continue something unless it is showing clear results" (Clark, 1988, p. 33). Numerous benefits for the teachers have been suggested, among them personal and professional growth (Beck & Black, 1991; Edwards & Craig, 1990; LaRocque, Boivin, & Downie, 1993; Oja & Pine, 1987) and the opportunity to examine practice (Smulyan, 1989). Such benefits, however, are yet to be validated, and benefits for the researchers in particular remain to be specified.

University-school collaboration has been primarily confined to intensive involvement in a dyad of researcher and teacher (Basaraba & Drake, 1993; Beck & Black, 1991; Elliott & Court-Lamond, 1993; Thomas & White, 1993). A common alternative is the use of a large team of researchers and practitioners (Bickel & Hattrup, 1995; Sinclair & Harrison, 1988). Either arrangement requires much time and cost. What is required is an efficient collaborative model that is yet to be identified.

Numerous issues thus exist about the processes and benefits involved in successful researcher-teacher collaboration. Critical processes appear to consist of efficient and effective methods of initiating collaboration, generating resources, and communicating. Such details, however, have not been identified, especially within an efficient model of collaboration. This study was designed to examine the processes and benefits of collaboration involving a researcher and schoolteachers for a project in special education.

Method

Participants

Participants in this study included the author, a university researcher and lecturer, and six teachers from an elementary school located in a middle socioeconomic status (SES) neighborhood in a medium-sized, west-coast metropolitan city in Canada. The teachers had five to over 20 years of teaching experience, and all were teaching mainstreaming classes at the time of the study. Three of the teachers had formal training or a degree in special education. Among the teachers was a special education coordinator. The researcher had two years experience teaching preservice teachers. With a specialty in special education, the researcher had also worked for 10 years in general and special education and children's mental health programs. The collaboration in this report lasted one school year.

Procedure

Once teachers consented to participate, parental consent was obtained for student participation in the program that was the focus of the researcher-teacher collaboration. Collaboration between the researcher and the teachers took place through meetings, informal interactions, and written communications between the researcher and the teachers. The special education coordinator also served as liaison between the researcher and the classroom teachers.

Data Sources

Using the participant observation approach (Denzin, 1989), the researcher kept field notes to record events and interactions in the meeting room, classrooms, hallways, and the schoolyard. She also collected documents (research and instructional materials, assessment scales, announcements), meeting minutes, notes from telephone calls, and letters and memoranda that were exchanged during the collaboration. The researcher also interviewed the teachers before the project and recorded the interviews. In addition, communications were recorded from three formal meetings with each of the classroom teachers during the project and the regular biweekly meetings with the special education coordinator. Other data were collected from the researcher's lecture materials and notes at the university.

Finally, a follow-up interview was individually conducted with five teachers after the completion of the project. Medical leave excluded one teacher from the follow-up. The researcher tape-recorded the interviews using a set of five questions to focus the teachers' reflections on the collaboration, in particular the effects of the collaboration on the children and on their own teaching. The tapes were later transcribed.

Data Analysis and Reliability of Analysis

Major processes and themes were derived using the constant comparative method (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Data were shifted and grouped according to common themes. Excluding the follow-up interviews, a total of 36 major processes or events were categorized. Based on the principle of triangulation (Patton, 1987), a second coder examined the reliability of the classification. This person read the data and examined the processes and major events that had been categorized by the researcher item by item for agreement

or disagreement. The second coder also noted major processes and events that had not been coded by the investigator. Percent of agreement was calculated by dividing the total number of agreements by the total number of items (as initially identified by the investigator) and multiplying the product by 100. The average agreement of the coders was 80.5%. The two coders together further sub-summed the identified processes into the final categories of processes and critical events. A major category was accepted only after the two coders agreed completely. Disagreements were discussed, and once consensus was reached the final categorization was accepted as an agreement.

The transcribed data for the follow-up interviews with the teachers were separately analyzed using the same method as for the rest of the data.

Accuracy of the school-related processes and events was further examined by the special education coordinator who found only one minor error in the title for a substitute teacher. Finally, based on Scruggs and Mastropieri (1994), the final categorizations and inferences were reexamined to ensure that they were supported by data.

Results

Major Processes of Collaboration

A number of major processes and events involved in developing researcher-teachers collaboration were identified (see Figure 1). A brief description of each follows. Following Scruggs and Mastropieri (1994), sources are noted in parenthesis. Except for the follow-up, data were collected during one school year from September to June; as a result, sources are noted by month/day and the term (e.g., 9/1/1 to 6/30/2).

Knowing the school context and building intervention on the teachers' experience. The study was initiated by a request from the school for university assistance for a special education issue, specifically, to promote social integration of children with special needs. The university researcher was assigned by her faculty to provide the assistance.

To begin her assignment, the researcher became familiar with the school. She learned about the types of disabilities present in the school and some of the strategies used to help integrate children with disabilities (Interview with coordinator and a teacher, 9/17/1). One strategy was a program called "The Wheelchair Wise Day" where children took turns being in a wheelchair all day to learn about the difficulties of mobility experienced by persons with a physical disability. Another strategy was the informal encouragement for parents of children with disabilities to invite classmates to their homes.

Based on the initial information the researcher discussed with the special education coordinator possible strategies to increase social integration of children with special needs. A suggestion was also included to evaluate the effect of the intervention (document, 9/30/1). The coordinator became convinced of the value of evaluating the intervention effects, but delegated to the researcher the responsibility for developing the research strategy. According to her, "This is where you as a researcher would do the best and this is where we teachers need help the most" (meeting notes, 9/30/1).

To develop the specific intervention program, the researcher held after-school interviews with each of the five teachers who had agreed to be inter-

1. Knowing the school context and building the intervention program on the teachers' experiences
2. Generating and making efficient use of resources
3. Maintaining efficient communication
4. Conflict and resolution
5. Finalizing the intervention program drawing on the teachers' feedback

Figure 1. Major processes in the researcher-teacher collaboration

viewed (Interviews, 10/15/1 to 11/21/1). The interviews revealed the teachers' beliefs that nondisabled children should also be responsible for the social integration of disabled peers and that lack of understanding and positive attitudes toward disability may be a major cause of peer rejection of children with disabilities (Dyson, 1994). These views were consistent with the literature confirming that peers held more negative views of children with disabilities (Graffi & Minnes, 1988), but that increased peer acceptance would result from increased understanding of disabilities (Bak & Siperstein, 1987). Other research indicated that education would improve understanding of disabilities and acceptance of children with disabilities (Donaldson, 1980). Using information from the teachers and literature, the researcher proposed a program that focused on raising awareness of disabilities among nondisabled peers. The program built on existing methods used in the school, such as the Wheelchair Day. The intervention was expected to have a positive effect on the nondisabled children's attitudes toward children with disabilities, and hence would enhance not only the social acceptance of children with disabilities, but also nondisabled children's self-concept. The effects were to be assessed through child assessment scales. The project was termed Friend-making.

Generating and maximizing resources. Interviews with the teachers revealed that teachers required release time to participate in the research project and to hold regular meetings with the researcher. At the suggestion of the special education coordinator, the researcher requested funding from the District Director of Special Education (document). Release time for the teachers was granted on the grounds that the project was in line with the District's policy for mainstreaming (meeting with the District Director, 11/28/1).

Because the release time was limited with a total of one day for all teachers together (0.2 days for each teacher) over a six-month term, the researcher and the coordinator developed a plan to use the limited time efficiently. This involved limiting formal meetings between the teachers and the researcher to only three throughout the program: before, during, and after the program delivery (meeting notes, 12/16/1). Because the allocated release time was sufficient for only two meetings, time allocated for collaboration between the special education teacher and the classroom teachers was used for the third meeting. The additional time required would be donated by the teachers after school or at lunchtime. A further plan was to hire a substitute teacher to circulate among the classes while their teachers took turns meeting with the researcher for collaboration. This method would enable the researcher to meet with each teacher individually for half a day. The alternative, for all teachers to

meet with the researcher at the same time, would have incurred five times the cost (one half day for each teacher) in substitute teachers' time.

Maintaining efficient communication. The major and formal means of collaboration and communication between the researcher and the classroom teachers was through the three collaboration meetings. The first meeting clarified the purpose and procedure of the study and the assessment methods (meeting notes, 1/9/2), set out the roles and responsibilities for the teachers and the researcher, and identified a method of obtaining parents' consent for their children to participate in the study. Subsequent collaboration meetings were to inform the teachers of impending project activities, to determine the intervention program, and to seek their feedback (meeting notes, 3/30/2). Before each meeting, written materials such as the assessment scales (meeting notes, 1/9/2) and the outline of a draft intervention program were sent to the teachers (document, 3/23/2). Meeting time was thus mainly spent in clarifying issues and receiving feedback from the teachers, who had already had the opportunity to read over the research materials. Other brief communications with the teachers were made through telephone calls or chats in the hallway.

Researcher-teacher communication was further facilitated by the special education coordinator, who organized the collaboration meetings. An example of an efficient communication is the memorandum sent by the coordinator to the teachers as follows:

Dear Teachers:

It is now time to review where we are with the Friend-making project and to talk about some possible interventions. Be thinking about what intervention you would like to see (if any) and what would work for you and your special needs student. I have booked A. H. to come in on Monday morning (March 30) to rotate between your classes for one 40-minute block per teacher. Lily and I will be serving coffee and cookies in the multipurpose room. I hope that the following time works for you ...

Thank you for all your hard work and cooperation throughout this project. S.
(Document)

Through the communication methods used by the researcher and the special education coordinator, contact and interaction between the researcher and the teachers proceeded smoothly and efficiently.

Conflicts and resolutions. The major conflict in the collaboration had to do with the assessment scales. One source concerned an assessment scale, the Social Network Form, which was developed to assess the degree of social inclusion for children with disabilities (meeting notes, 1/9/2). Based on Grounlund's (1959) sociometric rating, the scale asked, "Whom would you like to be your friend the most?" and "Whom would you like to sit next to you the most?" The teachers indicated that these questions would force children to choose among peers and might cause uneasiness, and at the same time might embarrass those who were not chosen. One teacher stated that the questions compared children, which was against her teaching practice (meeting notes, 1/9/2). Another teacher considered the word *help* in another question "Whom would you like to help the most?" to be derogatory as it conveyed a sense of helplessness in the identified children (meeting notes, 1/9/2).

Three teachers expressed their uneasiness with the wording used in the Chedoke Children's Attitudes Toward Children with Handicaps Scale (CATCH, Rosenbaum, Armstrong, & King, 1986), which was to measure children's attitudes toward disabilities. Two of the teachers did not like the term *handicapped people* and regarded the general reference made to such individuals to be negative (meeting notes, 1/9/2). One teacher stated that the term counteracted her teaching, which deemphasized differences and *separateness* (meeting notes, 2/5/2). According to her,

By giving a test like this, we may create feelings and awareness of differences when we are trying to make everyone not different from others. For example, the idea in this item, "I don't like to have a handicapped child living nextdoors," would have never occurred to the children to begin with. They would be shocked that we even think of this kind of thing. They have been with Jill (fictitious name) for two years now. Jill is limited—she can't talk and is in the wheelchair all the time. But she is one of the group, the class. Children would not have thought about not wanting to have her live nextdoors or to invite her over to their house. (meeting notes, 2/13/2)

Further concern regarded the wording such as *I would not mind*, which was considered difficult for children to understand. A teacher and her aide further suggested that the response choices of the scale that stated "strongly agree" or "agree" be replaced by graphic representations such as drawings of faces to indicate different degrees of agreement. To them, graphic representations would not only be more readily understood by the children, but also more appealing to them (meeting notes, 1/9/2).

Two teachers brought the researcher's attention to the test anxiety that might come with the assessment as children were not used to testing any more (meeting notes, 1/9/2). All teachers had to confess that although endorsing the project, they were less interested in the assessment for research. A teacher's comment summarized her colleagues' sentiment:

When you use child psychological scales for assessment, it's like you are giving tests to children. Testing is really against the spirit of the Year 2000 curriculum [sic] which is trying to do away with testing and to avoid comparison. (meeting notes, 1/9/2)

The Year 2000 was the framework for educational programs in the province's public schools at that time.

Despite these concerns, all the teachers stated their support for the project pending the revision of the assessment scales in question. The researcher also assured them that clear instructions for administering the assessment would be given to avoid personal evaluation and test anxiety. Moreover, the researcher invited the teachers to assist in the revision of the CATCH. This was accepted, and teachers individually assisted in rewording or reading the revisions until they were satisfied with the scales.

As a result of the revisions to address the teachers' concerns, the final version of the CATCH replaced the term *handicapped children* with *children who need extra help*. For the teachers, this new term did not attach a label to students with disabilities and yet would be understood by all children. A definition of the term, however, was added by the researcher to ensure that the term ac-

curately conveyed the meaning of children with disabilities. Negative phrasings in the scale were further replaced by positive ones. In addition, graphic presentations were added to replace the initial response choices of “strongly agree” or “agree.” The consistency of the revised form with the original was examined with a class of children. Correlation between the two scales was an alpha of .84 with the Brownson-Spearman split half model and the internal consistency of the modified version was .95. Figure 2 presents a sample of the revised CATCH items. As well, a new Social Network Form was developed to include items such as “Whom do you play or socialize with the most?” instead of “Whom would you like to play with the most?” The new item reports actual behavior rather than requesting a statement of comparative preferences.

Additional minor conflicts involved logistics and unexpected problems. For example, once the teachers were satisfied with the assessment scales, the study began with data collection. After the pretest, an astute teacher reported that her grade 3 class had noticed that videotaping had focused only on the child with

Children: I will read each of the questions on this questionnaire. Please put a check (✓) in the box by the face to show your answer to each of the sentences. There are no right or wrong answers. We just want to know your ideas. Please do not read ahead. Think each sentence carefully.

1. I would like a child who needs extra help to sit next to me in class.

 ☐	 ☐	 ☐	 ☐	 ☐
Never	Not very often	I don't know	A little bit	A lot

2. I would like to show my friends a child who needs extra help.

 ☐	 ☐	 ☐	 ☐	 ☐
Never	Not very often	I don't know	A little bit	A lot

3. Children who need extra help can do lots of things for themselves.

 ☐	 ☐	 ☐	 ☐	 ☐
Never	Not very often	I don't know	A little bit	A lot

4. I am comfortable talking to a child who needs extra help.

 ☐	 ☐	 ☐	 ☐	 ☐
Never	Not very often	I don't know	A little bit	A lot

Figure 2. Sample examples of the revised Chedoke Children's Attitudes Toward Children with Handicaps Scale.

special needs although the class had expected it to be directed at interaction between children. The teacher reported, "The children wanted an explanation [for videotaping]. They would like to be on the video too" (Field notes in the hallway, 3/9/2). Videotaping was being carried out to assess social interaction between a child with special needs and other members of the class. The researcher quickly accepted the teacher's suggestion to include other children in the videotape. However, only the child with special needs was the target of data analysis. This measure satisfied the children.

A more critical issue arose when a small group of children engaged in inappropriate play at a child's home. Although the incident was totally unrelated to the project, the project was immediately suspended for all the classes (meeting with the coordinator, 3/23/2). This was to avoid any complication that could arise from the project's aim for promoting friendship, which had also been intended by the child's family.

Teachers finalizing the intervention programs. Feedback was sought from the teachers about the final intervention programs that had been approved by the special education coordinator. The teachers restated their preference for experiential learning for their classes (meeting notes, 3/30/2). The workshop format with simulated activities was thus agreed on by the researcher and the teachers as the method to teach four areas of special needs: physical, visual and hearing loss, and cultural diversity. These disabilities were present in the teachers' classes. Although not intended as a disability, the last topic was added to accommodate one teacher's interest and concern over social isolation and learning difficulties often experienced by new immigrant children. Funding and time limitations, however, permitted the delivery of only three programs to each class. Moreover, on two teachers' recommendations, local special education teachers in visual and hearing impairment were invited to help the university research assistants teach the awareness programs. This not only brought in experts to teach children, but also reduced the program cost.

Benefits of the Collaboration

General outcomes. Of the several outcomes of the collaboration, perhaps the most significant was the initiation of a pioneering project involving the university and the school in jointly addressing a special education issue. The most immediate and practical outcome was the delivery of a series of learning programs about disabilities to five elementary classes for the purpose of promoting the social integration of children with disabilities. This was followed by the receipt of two research grants to continue the project. In addition, another school agreed to participate for the following year.

Benefits for the researcher. For the researcher an immediate outcome was the fulfillment of the assignment to help a school develop a special education program. Perhaps greater gains lay in her professional growth. Through the collaboration, the researcher learned about teachers' practices to promote integration of children with disabilities and their perceptions of program assessment and implementation. She also witnessed how teachers tested the ecological validity of researchers' products such as psychological assessment scales. From this experience, she learned that products developed in the univer-

sity setting may not be readily acceptable and applicable in a practical setting such as school.

The collaboration further enriched the researcher's university teaching and her students' learning by providing first-hand information about special education practice in schools. A summary of approaches used by the teachers to integrate children with disabilities was presented to the classes before its publication (Document, lecture notes). Teaching methods employed by the classroom teachers were also transmitted to the university students. These included modifying curriculum to teach language arts to children with mental handicaps, and adapting a wheelchair to enable a child with physical disabilities to sit with peers at the same table (Dyson, 1994). Other practical materials indirectly passed on from the special education teacher to the university students included: a booklet for raising awareness of disabilities, *Understanding Children with Special Needs: Handi-Capable Kids* (Creative Teaching Press, 1991), and guides for parents to help children develop friendship (document). As well, samples of work were collected from the school and used to enhance university students' understanding of learning disability (document).

University students' attention was apparent when the researcher showed them an unedited videotape of the project made at the school. A student remarked, "It [the videotape] makes sense to us because it was made here" (Teaching notes, 3/26/2). The videotape had been produced in a familiar setting and a potential practicum site for the students.

Benefits for the teachers. Analysis of the follow-up interview data with the teachers resulted in three major themes: (a) the collaboration was successful, (b) the collaboration benefited children with and without special needs, and (c) the collaboration promoted the teachers' professional and personal growth. All but one teacher regarded the collaboration as successful. Evidence considered was the teachers' continual participation in the project and the outcomes. A teacher succinctly declared, "I wouldn't have done it [collaboration] if I felt it was not successful" (follow-up interview). When asked whether the collaboration was successful, the special education coordinator answered,

Yes, because of the work that came out of it. So it wasn't just paper work and conversation that went nowhere. There were some good things that came out of it and these are the tests: that kids being invited to birthday parties, kids being invited over on a Saturday afternoon, but most importantly what came out of this was special ed. parents, or parents of special ed. students, doing some inviting which seemed to have been harder to me than getting the regular ed. kids parents to do.... The teachers also got a lot of support for doing anything that led to peer relationships and the growth of these relationships. (follow-up interview)

The only teacher who was less positive about the collaboration outcome considered the program developed through the collaboration to be "good." However, she was concerned that university students might not be qualified to deliver the program for lack of teaching experience. For her the program would be better delivered by counselors, who could respond to feelings associated with disabilities and special needs.

All teachers, however, regarded the program delivered through the collaboration to have benefited the children with special needs. The most apparent benefit applied to a child with the diagnosis of autism. To the question of

whether the collaboration benefited the students, the special education teacher responded:

It did, absolutely. We were talking about the birthday parties, the inviting, the acceptance, the increased understanding. At the end of the year when Tim went around to his grade 6 class and thanked them all for helping him, and gave a little caramel to them all, there were almost tears in the eyes of those kids, right? Now that couldn't have happened without something happening all year long to make that happen because those were real feelings—that those kids ... those kids really took ownership of Tim. But they took ownership because of the things that happened in that classroom and the understanding [of disability]. The kids now looked at Tim as an opportunity for them to learn something about autism. (follow-up interview)

Another teacher related that a child with special needs in his class gained in “her sense of self-esteem” (follow-up interview).

The programs resulting from the researcher-teacher collaboration were also evaluated to have a positive impact on nondisabled children. A teacher commented that

I think when kids can actually be put in simulated situations as the kits [Friend-making programs] that were trying to educate them about, then they have some experience about what it's like to try and do these things or to work with this problem. Then they became more aware and have more appreciation for those who have had to struggle with it. So those were very good. (follow-up interview)

The most apparent effect on nondisabled children was observed by the special education coordinator. She remarked:

So the special ed. kids benefited, but I always think there's probably bigger benefit to the regular ed. population who have increased sensibility and caring and understanding. Because we always fear what we don't know. And they no longer had to fear special ed. kids because they would know it [after the programs]. When you look at the what happened in Stacy's classroom with everybody climbing all over the kid's [girl with disabilities] equipment and how those grade 2 and 3 kids could mop up that little girl's drool without a thought, that's when you know you've made a value change for those kids. (follow-up interview)

Four teachers further reported their own professional growth. For the special education coordinator, the collaboration and the program gave the other teachers “the courage; it gave some of them a plan, and it gave them some excitement and that's what they needed” (follow-up interview). A classroom teacher said the program had made her “more aware, more sensitive, and trying to perhaps provide structure or situations where it's going to be easier for these other kids, those with special needs, and also easier for regular class kids to perhaps help them and work with them” (follow-up interview). The collaboration also benefited a new teacher. For him the collaboration and the program

certainly clarified in terms of philosophy and the whole nature of inclusion because the school was looking at inclusion models. So it created a greater awareness for inclusion and it helped me to focus on, if inclusion is important

and necessary, what type of mechanisms need to be in place for it to happen.
(follow-up interview)

Professional growth extended to other aspects of the teachers' life. Teachers experienced greater awareness of children with special needs. One teacher reflected that

Sometimes we don't realize [the special needs] when we are dealing with so-called normal kids most of the time. I think it [the Friend-making project] gives us an idea of how we could make our regular class students more sensitive and more aware to the problems of others if we have some understanding ourselves.
(follow-up interview)

The new teacher further reported that the project had created his "sensitivity to learning disabilities which affected my clientele with behavioral disorders" and led him "to look at some of their literature and touch base with the research" (follow-up interview). The special education coordinator gained from the collaboration in a different way. She told the researcher:

I felt affirmed. I felt very affirmed by all the comments I got from you and from the other teachers that we were going in the right direction ... Yes, I think I felt smarter. I think I felt smarter because, you know, you're a highly educated professor and you made me feel like you're equivalent in this area, and that was very affirming for me. I think it benefited the other teachers, likely personally. I think they felt a change in some ways by the procedures we put into the classroom. At least, that's the feedback I got from them. They would tell me with excitement some of the things that were going on, comfort levels that their other kids had seen [in children with disabilities] or they had observed in their students. (follow-up interview).

One teacher, however, suggested that to maximize the benefit of the collaboration, an earlier start of the project would have been desirable, to be followed by an earlier review of the project outcomes in which action plans are generated for making changes in the classroom and teaching. No teacher showed an interest in discussing the initial revision of the assessment scales. In passing, a teacher remarked, "I guess at that time they [issues about assessment] seemed important but the new scales were fine."

Discussion

This study examined the processes involved in researcher-teacher collaboration to develop a special education program. The outcomes and reflections of the researcher and the teachers suggest that the collaboration was a success. Critical processes experienced by the researcher included (a) knowing the school culture and building programs of concern on teachers' expertise, (b) creating and maximizing resources, (c) maintaining efficient communications with teachers, and (d) resolving researcher-teacher conflict through collaborative problem solving. These processes, not yet empirically identified by other studies, are consistent with the theoretical expectations for successful collaboration. Building a research program on the teachers' experience and expertise may have reduced the potential for conflict that could have arisen due to different cultures represented by the researcher and the teachers. The release time generated through the project, albeit limited, enabled the teachers to engage in collaboration with the researcher without sacrificing their personal

time. Efficient communication methods further connected the researcher and the teachers without the need for extra formal meetings.

Consistent with the literature (Clark, 1988; Lieberman, 1986), conflict in the present researcher-teacher collaboration arose. The major source was apparently the discrepancy between the teachers' teaching philosophy and the researcher's following the traditional research practice in which published assessment scales are commonly used with no questioning of their practicality. However, applying the colleague model (McDaniel, 1988-1989), the researcher resolved the conflict by involving the teachers as equal partners in revising the assessment scales and subsequently finalizing the intervention program. Through mutual contributions by the researcher and the teachers, the thoughts and beliefs of the teachers were accommodated in the assessment tools and the intervention programs without sacrificing the validity of the research tools. It is also apparent that teachers would accept an assessment tool that would not only suit the children's level of understanding and emotional comfort, but also conform to the teachers' own professional beliefs and current school practices. Other unexpected problems may arise from children's objections to the research process, and from events that happen away from school that might threaten the integrity of the research project. Such logistic difficulties would require immediate action by the researcher.

The collaboration clearly benefited all stakeholders: teachers, children, and the university researcher. This is consistent with the suggestion by Clark et al. (1996) that collaboration between teachers and researchers enhances the life of all involved with the end goal of improved education. The present benefit may have extended beyond professional and personal development for teachers and the researcher, to bridge the gap for teachers in training between the university lecture hall and the public school.

Through this study a set of processes have emerged that link with successful researcher-teacher collaboration. The processes would consist of (a) researcher sensitivity to and acknowledgment of school culture, (b) the incorporation of teachers' expertise in the research process, (c) generating resources for teacher time, (d) developing efficient communication methods, and (e) resolving conflicts through a colleague model of collaboration. The results further demonstrate that successful researcher-teacher collaboration can take place within an efficient model consisting of a researcher and a number of teachers.

Typically, university researchers enter university-school collaboration with a set research agenda (Boyer, 1982) that may conflict with the traditional practices deeply imbedded in the belief system of teachers (McDaniel, 1988-1989). Another practice involves the joint determination of the research agenda by the researchers and the teachers (Smulyan, 1989), which nonetheless may be time-consuming (Stevens et al., 1992). This study demonstrates still another approach in that collaborative research may be initiated by taking the lead of a school's concern, followed by negotiations between the collaborators for the method of assessment and contents of research activities. Although teachers did not take on research roles such as gathering and analyzing data, they participated in decision-making about the design of the intervention program and the measures to assess effect of the programs. There was thus parity in the

relationships between the researcher and the teachers, which is considered important for successful collaboration (Cole & Knowles, 1993; Smulyan, 1989).

Conclusion

This study demonstrates that university researchers can successfully collaborate with teachers to address practical issues in education. The study further confirms that teachers are qualified evaluators who can test and refine research tools and programs (Patterson & Stansell, 1987; Stevens et al., 1992). The onus, then, is on the researcher to devise processes to involve teachers in refining research tools and designing an intervention program. Although certain processes that lead to successful researcher-teacher collaboration have been identified, more should be explored, as well as other forms of effective collaboration. A further challenge for researchers would be how to restructure the research instruments and agenda to accommodate teachers' teaching philosophies and school practice without losing research integrity and scientific merits.

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Teachers, Computers, and the Internet: The First Stage of a Community-Initiated Project for the Integration of Technology into the Curriculum

This article reports on a study of the reaction of teachers in a secondary school to the rapid introduction by a community group of a computer laboratory connected to the Internet. Informed by current research in classrooms, the researchers used survey, observational, and interview data to examine how teachers approached the availability of such resources. They found that district policy helping to guide the introduction of the technology into the curriculum was absent, that teachers required time to understand how the technology could be integrated into the curriculum, and that traditional inservice strategies needed to be adapted.

Cet article fait le rapport d'une étude sur la réaction des enseignant(e)s dans une école secondaire lors de l'introduction rapide, par un groupe communautaire, d'un laboratoire d'informatique ayant des ordinateurs branchés à l'Internet. Guidés par la recherche courante obtenue dans des salles de classe, les chercheurs ont utilisé des données à partir de sondages, d'interviews et de stades d'observation pour déterminer la façon dont les enseignants et les enseignantes abordent la disponibilité de telles ressources informatisées. Ceux-là ont trouvé qu'il y avait un manque de direction au niveau de la politique du district scolaire pour faciliter l'introduction de la technologie dans le curriculum, que les enseignants et les enseignantes avaient besoin de temps pour comprendre comment la technologie pourrait s'intégrer dans le curriculum et que les ateliers de stratégies traditionnelles offertes aux enseignants et aux enseignantes devaient être mieux adaptés à leurs besoins.

The public regards the introduction of computer technology into schools as inevitable and a priority (Oppenheimer, 1997), but the introduction of such technology is a complex matter, consideration of which is often lacking. This has frequently led to the introduction of technology without an understanding of the issues involved or of the research needed to inform the initiative. For this reason two key ingredients promoting its successful usage, the provision of sufficient technical support and the in-depth preparation of teachers, are quite

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often lacking. Currently the incorporation of computer technology into the curriculum has been made more complex with the arrival of the Internet as an instructional tool.

As part of an ongoing study of computer usage in one particular school, this article reports on the initial investigation designed to establish a baseline for teachers' reactions to the new technology and to gain insight into the issues that they faced. As explained below, the opportunity for this study began with the rapid creation of a computer laboratory that doubled the number of computers and introduced the Internet into the school.

Introducing Computers into the Classroom

Parallels exist between the general literature on the introduction of change (Fullan, 1993; Hargreaves, Earl, & Ryan, 1996) and the specific literature on the introduction of computers and computer technology (Hurst, 1994). The general literature exploring change suggests that teacher educators and administrators need to be aware of the basic principles for the successful introduction and implementation of change initiatives (e.g., change takes time, change must involve all stakeholders, and problems and problem-solving are part of the process) as well as the strategies associated with bringing computers and the Internet into the curriculum. With these general principles as a backdrop, one school's experiences with the introduction of computers and the Internet in the classroom are examined here.

Problems

The first crucial step for the systematic introduction of computers and the Internet into the curriculum is understanding the problems associated with teacher preparation. Although most new teachers have been exposed to a computer technology component in their preservice programs (Pina & Harris, 1993), experienced teachers often require training in the technology. For this reason the first part of this section of the review focuses on key problems of training and training strategies.

Lack of school district guidelines. In many instances, computers are brought into schools with little thought to developing a clearcut plan for their systematic introduction (McMullen & Keane, 1992), often resulting in haphazard or limited use of the technology.

Lack of knowledge. The speed with which computer applications have expanded and the availability of more sophisticated hardware and software have left many teachers unfamiliar with, and often fearful of, the technology (Hargreaves, 1994). Although recognizing the need to incorporate this technology into the curriculum, teachers often lack technical confidence and exhibit anxiety about their ability to introduce computer-based instruction into lessons (Pina & Harris, 1993). This reluctance has its source in many areas including a lack of typing skill and little or no previous exposure to computers (Gordon, 1993). Often, if inservice training is provided, it is usually of one day's duration and is not particularly effective in supporting the effective use of the technology (Hurst, 1994).

Time. The amount of time required to become familiar with computers and the Internet is substantial (Gallo & Horton, 1994; Honey & McMillan, 1993). Unfortunately, with budgetary cutbacks and with increasing demands placed

on teachers, the allocation of time during the school day for learning how to apply the technology in classrooms is not likely to materialize.

Professional risk-taking. Most teachers lack training of any kind in computer technology (Honey & Henriquez, 1993). Unfortunately, teachers are likely to be reluctant to use computer laboratories to learn for fear of exposing their lack of knowledge and skill to their more technologically able students (Hurst, 1994; Marcinkiewicz, 1993-1994).

The alteration of the nature of teaching. Several authors (Curtin et al., 1994; Hannafin & Savenye, 1993; Means & Olson, 1994; Snyder 1993) suggest that using computer technology may cause teachers to rethink their current methods of instructional delivery. As a consequence some teachers may be uncomfortable with or resistant to learning new strategies or to altering what they consider to be proven instructional methodologies (Hannafin & Savenye, 1993; Means & Olson, 1994).

Access and technical support. Start-up and maintenance costs and lack of technical support limit teachers' access to hardware, to applicable software, and to the Internet (Gallo & Horton, 1994; Honey & McMillan, 1993; Norman & Carter, 1994). Even when access is not a problem, teachers often lack the technical support to help them to learn about computer technology and about the best way to incorporate this technology into the curriculum (Honey & McMillan, 1993). Without this support, teachers are faced with trying to determine on an experimental and experiential basis the applicability and appropriateness of available and often expensive software, much of which may not be applicable (Hannafin & Savenye, 1993).

Teacher Preparation

The problems cited above are not insurmountable, and often the paths to their resolution are obvious. The techniques for effective training as suggested in the literature are grouped under three headings: Context, Principles, and Methods.

Context. Before the introduction of computer technology, or at least before the use of computers in all classes, school district policies should establish the framework for the introduction of the technology, set the priorities and expectations for teacher and student access to machines, and determine the level of technical and financial support (McMullen & Keane, 1992). By so doing, school districts signal to teachers and to the community their commitment to, and support of, the initiative (Dwyer, 1994).

At the school level principals' support is crucial, as the technology and attendant instructional strategies may require some reorganization of class groupings and schedules (Dwyer, 1994). In successful initiatives this support has created a cultural shift in the school such that experimentation and collaboration among teachers is fostered (Means & Olson, 1994).

Principles. Emerging from the literature are the following principles for the introduction of computer and telecommunications technology into the classroom.

1. The successful introduction of computers into the curriculum is a complex process (Curtin et al., 1994; Dwyer, 1994; Richey, 1994).
2. Teachers need to be involved heavily in the selection of hardware and software and in the formulation of policies and strategies for the implementation of this technology (Wiburg, 1995).

3. A fundamental shift in the current conception of a scheduled day and of classroom structure may be required to accommodate instructional changes (Dwyer, 1994).
4. Not all teachers will embrace the changes (Hannafin & Savenye, 1993).
5. Teachers need to be provided with adequate time and opportunity to become comfortable with the technology (Savenye, 1993), otherwise, disengagement may result, with teachers feeling alienated from the process (Apple & Jungck, 1992). Familiarity with computers often reduces fear and encourages their use in the classroom (Dupagne & Krendl, 1992; Overbaugh & Reed, 1992).
6. Because all teachers are not at the same level of understanding of computer technology or prepared to use it, professional development should reflect these differences (Hurst, 1994).
7. Professional development in the use of the technology must be viewed as a continuous process requiring different methods of delivery over time (Hurst, 1994).

Methods

Although school culture and context are important and determine to a large extent the success of the specific methods used to introduce change (Fullan, 1992), general strategies can provide a framework for understanding in particular settings. For the integration of computer technology, some conclusions about best practices for implementation are suggested as being effective.

- The use of teacher volunteers when planning and implementing the initiative provides the impetus for others to become interested and increases the likelihood of success (Richey, 1994).
- A set of the core basic skills to be acquired by staff needs to be developed (Hurst, 1994).
- The provision of a "safe" area away from student scrutiny gives teachers privacy to practice their skills or to plan (Hurst, 1994).
- Achievable and realistic goals, both for the acquisition of skills and the integration of computer technology, are essential and are context dependent (Ragsdale, 1989).
- A realistic timeline for implementation needs to be established (Richey, 1994).
- After the initial introduction, teachers require opportunities throughout the year to improve their skills and to collaborate. Professional development should be seen as a continuing process (Hurst, 1994).
- Regular assessment of the progress of the initiative is necessary to develop a sense of future directions and to make any needed adjustments to the implementation plan (Hurst, 1994).

Although the literature indicates some problems and solutions associated with introducing computers into the curriculum, technology appears to be outstripping the research. For example, a search of ERIC and other such data bases produces a greater number of articles focusing on specific, step-by-step approaches for implementation based on ongoing research than on completed studies; findings from completed studies are few. Knowing that we needed to have a better understanding of the use of the Internet and other rapidly evolv-

ing technology in schools, we began the exploration of how secondary teachers reacted to a new computer laboratory in their school.

Research Methodology

The Context

In the district in this study, schools have moved at different rates in the effort to introduce and incorporate the new technology into the curriculum. Although some schools have access to the latest innovations, such as the Internet and multimedia/CD-ROM, other schools are still making do with outdated technology. The trend, however, is for most schools to be in transition, gradually upgrading their existing computer technology in an attempt to keep abreast of the constant stream of advances, all the while having to cope with limited financial resources. In these latter instances, the focus has been on the installation of the technology and not on the training of teachers in its use. The secondary school in this study typifies these transitional schools.

This secondary school serves a fairly large geographical area, has approximately 1,200 students of all ability levels in grades 9 to 12, and is administered by a principal and four vice-principals, one for each of the grades. The students are relatively homogeneous culturally and ethnically, although several cultural and linguistic groups are represented. With family income derived from primary, secondary, or tertiary industries or from seasonal employment, students come from a variety of socioeconomic backgrounds.

Before beginning the study, the school had one computer lab established in November 1993. It comprised 24 IBM 386 computers (with no CD-ROM) connected by a Novell network driven by a 486 CPU with 16 megabytes of RAM and a 500-megabyte hard disk. According to the mathematics and computer teacher in charge of the computer lab, it had been established quite quickly. He said, "I went from Friday afternoon with about 12 working Commodore 128s to a Monday morning with 24 working 386s."

Classes were scheduled in the lab every day from 8:30 a.m. to 3:30 p.m., with the Computer Related Studies (CRS) course being the primary user. Interspersed between CRS classes were classes in such areas as biology, community living, and accounting, these latter using the machines primarily for word-processing. Given this pattern of use, teachers and students expressed surprise in February 1994 when, on short notice, a second computer laboratory was established as a result of a grant to a community group from a federal funding program. This new lab was equipped with 22 486 IBM-compatible computers, a CD-ROM, the school's first Internet link with Netscape browser and communication capabilities, and educational software packages installed on each machine. With the new lab, over a two-year period the school had gone from a computer to student ratio of 1:100 in September 1993, to 1:50 in November 1993 to 1:26 by February 1994. With such changes, expanded possibilities for computer use in curriculum areas other than CRS now existed.

Before each class computers were set to the main Windows menu and school directory so that students could click directly into Netscape, but the Netscape browser became the predominant focus of students' attention. Due to the speed of installation of the second laboratory and to lack of funds for training, teachers and students received only minimal instruction on the use of the new equipment and software. Further, the school did not have the budget

to employ a full-time lab monitor to assist those who wished to learn about the new technology. Although welcoming the new technology, the school faced the major challenge not only of using the new lab effectively and efficiently, but also of helping teachers to integrate the new technology into subject areas outside of CRS. As well, the new technology, including the Internet, was unfamiliar to the handful of six or eight teachers who used computers regularly.

The Study

To the research team this school represented an opportunity for a multiphase exploration of the integration of technology into the classroom. To this end we identified several areas of investigation including the administrative challenge of encouraging teachers to incorporate the new technology into the curriculum; the patterns and types of teacher use of the new lab; and, eventually, the ways to use and to integrate the available technology into the curriculum.

Using constructivist principles (Driver, Asoko, Leach, Mortimer, & Scott, 1994), we designed a case study approach using a mixed-methods form of inquiry (Greene, Caracelli, & Graham, 1989) that would also provide us with a baseline for further inquiry. The structure of the inquiry used is as follows.

1. Throughout, the processes of data collection and of data analysis were interactive. Beginning with the observational data collected in the lab, the form and substance of later data collection techniques (discussed below) were formulated. As a result, both qualitative data (interview and observation) and quantitative data (survey questionnaire) have informed this study.
2. Based on the continuous construction and negotiation of meaning among the researchers and verification with the observer, the findings have been grounded in the data and not in theoretical preconceptions (Brinberg & McGrath, 1982). To this end observation preceded the development, administration, and analysis of the survey questionnaires, with survey results contributing to the formulation of the interview protocol. Research examining the introduction of technology in schools elsewhere was used as a comparison for our findings, which helped to determine the generalizability of our results to other contexts and curricula.
3. As the project proceeded, initial questions for inquiry became focused and new ones were added. Further research questions beyond the scope of this study emerged, and subsequently a research proposal for a second study has resulted.

Data Collection Techniques

Three-week observation period. Although instructed to maintain minimal interaction with users, a research assistant observed and noted teachers' and students' use of the laboratory from early morning when the lab opened until late afternoon when the lab closed. The observer paid special attention to the interaction between students, between students and teachers, and among students, teachers, and the resource person.

For the first two weeks a computer resource person temporarily employed by the community group assisted all who used the facility. During the last week, however, this person's employment ended, making the observer's in-

structions more difficult to follow when teachers and students turned to her for advice.

Survey. Based on the British Columbia 1988 IEA (International Association for the Evaluation of Education Achievement) Computer in Education Study, the research team developed a survey questionnaire to identify teachers' computer use. However, substantial adaptations were made in the IEA survey to incorporate the research assistant's observations and to allow for context. The questionnaire had three sections focusing on computer use in schools, teachers' opinions about computer use in the curriculum, and background. In the first section, questions focused on types of software used, on the frequency of computer use, on specific reasons why individuals had or had not used computers, and on difficulties most frequently encountered by users. All teachers ($n=63$) were asked to complete the questionnaires, but only 16 did so. The low rate of return may have been associated with the time of year the survey was distributed.

Interviews. After the administration and analysis of the survey, individual interviews were conducted with two vice-principals, two preservice teachers, and six teachers who represented most subject areas at the school. Interview questions were based on the survey data (e.g., problems with training and availability with the technology, the support needed for integrating computer technology, and perceived importance of the technology to learning) and on the need for further information about the extent of teachers' computer use at home and in school. On occasion the interviewer asked for additional clarification or elaboration. A letter of consent was signed, and all interviews were audiorecorded for transcription and analysis.

Data Analysis

For survey results both descriptive and inferential statistical analyses were used, with frequency analysis as the primary focus. Analysis of observational and interview data focused on pattern detection, on identification of issues not found in the questionnaires, and on possible explanations for findings. Team members conducted regular discussions for clarification of results of their analysis. The evaluation of the statistical analysis and of observation and interview data has been interreferenced.

Findings

Policy Context

A policy vacuum existed at both the district level and to some extent at the provincial level. This had several implications. First, little training took place before the arrival of the computers, and any that occurred appeared to be incidental or based on an individual teacher's interests. Second, due to financial constraints, the school district did not have anyone designated centrally to spearhead the initiative. (No names have been used, but when individuals are quoted a number is assigned.) One individual heavily implicated in the introduction of computers into the school stated that

We did not have a person at central office whose job it was to coordinate technology. And when you only have one curriculum person right now at central office, he really doesn't have much time to go out and address all the issues on technology. [T11]

Given its financial constraints, the school district collaborated with a community-based computer group who took a leadership role in providing computer expertise and in seeking out funding from such agencies as Human Resources Development. Although the district wanted the technology for its school, it did not have policies in place to provide the framework for the introduction of computers and the Internet or for teacher training. Although the method of acquisition could have created problems for the district, the potential advantages outweighed the drawbacks.

I would say that we have gone from the worst school in the District to almost the best board in the province, but it happened accidentally. It wasn't a program that was designed and implemented in logically sequential steps. Some technology money was dumped on the Board and they put it in here. If that money had not come... we'd still be working with Commodore 128s. [T5]

Third, over the long term, without coordination among parents, teachers, and the school district, teachers expressed concern about the long-term results of the initiative.

I don't have much knowledge about what is going on in the province, but my impression is that everybody is taking whatever machine they want and using that technology, and there doesn't seem to be any direction from the province. You know just "Here's the money you want," without looking at what kind of system would produce the best kind of work, make it more user friendly, what programs are available, who has the best software for school use. And it doesn't appear that parents are more knowledgeable than anyone else about what we should be looking at. It comes down to whatever the school has the parents will get. [T6]

This suggests that lack of a policy regarding hardware acquisition is only part of the issue. Nine of the 16 teacher respondents stated that limited software availability and technical support (Table 1) was either very much or somewhat of a problem, suggesting that policies also need to consider how the hardware is to be used and to provide sufficient funding and support for its use.

Technical Support

Part of the community-based computer group's submission for funding included hiring an individual for a three-month period to supervise and facilitate the use of the new laboratory. For teachers who tried to become familiar with the use of computers and the Internet, this individual proved to be an important aspect of the proposal. He provided support for teachers' efforts and helped them to use the technology in their subject areas, and addressed some of the issues of software information, a problem area identified by teachers (68.8% identified limited software information as very or somewhat applicable as a difficulty, Table 1). However, when funding for his employment ended, teachers had to proceed on their own. Problems arose for those who did not as yet feel comfortable with the technology, and especially for one of the computer teachers who assumed unofficial leadership in technical support.

When we had a person in there like Ed [the technical support person] or one of the other people from community-based computer group, that room was full all the time, and people went from nothing to Internetting in 30 minutes. And now

Table 1
Hardware and Software Difficulties Encountered by Teachers

Problem	Applicability		
	Very	Somewhat	Not
Insufficient Computers	5/16 (31.3%)	6/16 (37.5%)	3/16 (18.8%)
Insufficient Peripherals	1/16 (6.3%)	8/16 (50%)	2/16 (12.5%)
Technical Malfunctions	3/16 (18.8%)	6/16 (37.5%)	6/16 (37.5%)
Limitations of Computers	2/16 (12.5%)	4/16 (25%)	7/16 (43.8%)
Other Hardware Difficulties	—	—	1/16 (6.3%)
Limited Software	6/16 (37.5%)	3/16 (18.8%)	4/16 (25%)
Software Too Complicated	—	2/16 (12.5%)	10/16 (62.5%)
Poor Quality Software	1/16 (6.3%)	2/16 (12.5%)	8/16 (50%)
Limited Software Information	4/16 (25%)	7/16 (43.8%)	2/16 (12.5%)
Other Software Difficulties	—	—	2/16 (12.5%)

that there is nobody available to be a resource down there, I have people knocking on the door every morning saying, “Can I come in? Can I come in? Can I learn stuff?” When you have a school where you have people wanting to learn stuff and asking if they can come in and learn stuff and you have to say they can’t because there is nobody there, it’s hard. [T5]

Our research assistant also noted a difference. The following is from her notes of April 10, 1995.

Watching the transition from when Ed was in the lab to the “Edless” phase has been very interesting. When I arrived at the school last week, [the vice-principal involved in the project] was away and so I went to find [T5] and he told me that the sign up sheet was in the library as was the key. I went up and found only three people signed up for the whole week. The librarian told me that lots of people didn’t realize the list was there, and lots of people were signing up for periods on a same day basis. I came back on another day and saw three of [Teacher A’s] classes ... But twice I came up to see a class and they didn’t show.

While I was observing Teacher A, three teachers came in and asked me for the sign up sheet. Two asked me if I was the lab instructor. So I told them where the sheet was, and that there was no instructor. One guy literally panicked when he found out there was no instructor and wasn’t going to sign up, but Teacher A talked him into it.

Another problem concerned the supervision of the facility. As a vice-principal put it, “Without someone to coordinate the lab, there’s always a danger that you are going to get equipment that’s going to get stolen or damaged. Maybe that’s a risk you have to take.”

Inservice

Several issues arose out of the discussion concerning professional development. The majority believed that the traditional one-day exposure to a topic did not provide sufficient training or opportunity to learn how to use computers and the Internet in their classrooms. Complicating training is the fact that “it’s hard to go into a school and say to teachers ‘We’re going to make you computer

literate' if they are not willing to participate" [T6]. However, those interviewed did present specific criteria to be considered when training is planned.

Comfort. Teachers stated that they needed to learn about the use of the technology in a nonthreatening environment and that they needed to be familiar with the technology before introducing it into the classroom. Addressing the first aspect of comfort, one teacher said,

Teachers, along with adults more than students, are in awe of computers. They think they're some kind of smart machine. They don't see that they are just a dumb machine and the brains are in us and how we use them ... I think they have to be comfortable and realize that it doesn't take a monumental effort to learn how to do basic things on the Internet or the computers. [T3]

For two teachers, not being able to type contributed to their discomfort, but they seemed to be committed to the new technology and to learning the necessary skills. One vice-principal also suggested that teachers might feel more comfortable in acquiring these basic skills if they had the opportunity to work on their own away from students [T11].

The second aspect of comfort is the ability to introduce the technology into the curriculum with as few problems as possible. Unless the software could be used easily, teachers did not appear to have much interest in attempting to integrate the technology in their lessons.

I was comfortable with the situation at that time [with the technical support], but I don't think I would be that comfortable going in there on my own. Not at this point anyway. Maybe with more instruction on how to use it.

To surmount this obstacle, "You have to make it comfortable for teachers, make them understand how it works, describe to them how it fits in their specific program" [T5].

Time. Time for use and time in the schedule are two of the considerations teachers brought up during the interviews. Time to become comfortable with the technology and to incorporate it in courses appeared to be a key issue. On the questionnaires, 13 of 16 teachers responded that they were too busy with regular teaching to use computers in their course work. One teacher stated,

Teachers need a lot more time to get in there. You can stay after school but there's a limited number of hours that a person is going to stay after school. And there are exams to mark and assignments and prep[aration]s to do. [T4]

By allowing teachers to have increased access to computers, comfort comes from using it more and more. [T2]

Scheduling created problems for two reasons. First, when teachers taught two classes of students taking the same course and these classes did not have equal access to the laboratory, then teachers had two preparations, not one, thus causing them to reconsider the use of technology for instruction.

Second, the length of the class periods did not allow for detailed exploration or use of the technology to the extent that teachers wished. "The problem is our periods aren't long enough so when kids are getting in there, they are just accessing the information" [T1] without having the opportunity to manipulate that information. As a consequence, the likelihood of the successful application

of suggested classroom strategies became doubtful, thus causing some degree of frustration for teachers who tried to use these strategies.

Type of inservice. Most did not believe that a one-day inservice model was appropriate to learn the amount of information needed to make changes in planning and in delivery.

We know that workshops do not significantly impact on the teaching unless there is consistent support and follow-up. Far too often, we have used this workshop model which is I'm-going-to-fix-you model. Bring the teacher in and say, "Here's how you do this," and then sent the teacher back on their own when in fact they're going to do what they feel they can manage. We should be supporting them; we should be saying, "Look, we have someone in the school who can go into your class and help you." [T11]

This was also expressed by others who believed that long-term support had more potential impact than did a traditional workshop model.

Technology. The speed with which the technology changed concerned some teachers. As one aptly put it,

The amount of time it takes the teacher to put together the lesson plan, and once it's put together it may not be used the next year because the information will have changed or so much information will have become available. So the amount of time that teachers are going to have to have for preparation is a difficulty because the amount of time is being slashed that we have for preparation. We're more hands on and guarding the students than actually being able to produce quality lesson plans. [T6]

Teaching style. Teachers stated that traditional instructional strategies at the secondary level are not satisfactory for use with technology, as "any attempt to teach computers the same way you taught other stuff, say algebra, is doomed" [T5].

The lecture method of teaching is passing. The information is there. We will have to teach students how to find the information, how to process it, how to comprehend it, how to analyze it and draw out their own conclusions from the material.

At this stage of the introduction of computers and the Internet, the technology is in place and teachers have presented clear indications of the type of training they wished to have.

Conclusions

While establishing the baseline for a future study, the introduction of computer technology into this school serves to highlight four major complex issues involved in this initiative. First, parents lent their outright approval for this project by acting through the community group, and to a large extent their goal of establishing a lab was met. Implicit in its creation, however, was the parental expectation that teachers would incorporate the computer technology into their classes. Although fulfilling the parental goal, this initiative also demonstrated parental expectations and created externally set goals for teachers that teachers also recognized as being important.

Second, with the establishment of the new computer lab and its connections to the Internet, the focus on computer technology in this school changed from using it primarily in CRS and in a limited way in a few other courses, to a

reconsideration of its use in all other subject areas. In this start-up phase, teachers had limited technical and software support considered necessary (Gallo & Horton, 1994) to be able to introduce the technology effectively. Even if they wanted to pursue integration on their own, they lacked software, had difficulty learning about the various programs available, and had few time slots when either of the labs was available; CRS had priority for lab use.

Third, teachers were interested in and less hesitant when introducing computers and the Internet into their classrooms if they had technical support. Having someone on site provided teachers with instant responses to questions and with expertise for software and machine use. However, funding for installation did not allow for continuing support, and the school district's budget had already been strained, leading teachers to reduce their use of the technology once the support was withdrawn.

Fourth, teachers recognized the inevitability of computer integration in their school, a perception solidified by the extensive involvement of parents in the initiative and by the administration's encouragement of the community's action. In consideration of this initiative and in preparation for computer use, some teachers became involved in, or understood the need for, additional professional development focused on the technology. For them the type of professional development needed to reexamine and possibly to reconceptualize their practice to allow for computer integration required ongoing, interactive support, not a series of one-day inservice sessions.

What this baseline study shows is that purchasing machines and installing them on site will not automatically result in computer integration in the classroom; this is only the beginning of the process. To facilitate the process, the four highlighted issues need to be addressed to encourage computer integration. However, to address them properly would require proof to the community that integration of the technology into the classroom was taking place; a redesign of the timetable to allow for additional slots for other subject areas than CRS; technical support; budgetary allocations to permit the purchase of software and supporting resources; and ongoing, professional development. In effect, the district's and the school's administrators have to place a priority on the integration of the technology, to write policy to support the initiative, and to reallocate resources from other areas to meet the community's and teachers' goals for the technology.

In recognition of the complexity of the process and to help the school in its efforts, a second study addressing the major issues identified was designed with the aid of teacher volunteers and is nearing completion.

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Teachers' Knowledge of Reading Instruction: A Description and Investigation of Effects

This study reports on a secondary analysis of international data to describe reading instruction in one educational system and to investigate teacher and student variables of instruction. First- and second-order factor analyses identified two approaches to reading instruction: (a) comprehension strategies in communicative contexts, and (b) teacher-centered instruction of hierarchical skills. Based on factor scores, cluster analysis revealed four teacher groups, none of which represented paradigms in the literature. No relationships between instructional approach and teacher background, student background, and student achievement were found. Finding that more than 80% of teachers were eclectic challenges claims of revolution in reading instruction and suggests evolution.

Cette étude fait le reportage d'une analyse secondaire de données internationales qui cherchait à décrire l'instruction de la lecture dans un système d'éducation particulier et de sonder les variables de l'instruction chez les enseignant(e)s et les apprenant(e)s. Des analyses de facteurs du premier ordre et du second ordre ont permis l'identification de deux approches à l'instruction de la lecture: (a) des stratégies de compréhension dans des contextes communicatifs, et (b) l'instruction centro-enseignant(e)s d'habiletés hiérarchiques. En se basant sur les scores de facteurs, l'analyse révèle quatre groupes d'enseignants dont aucun représentait des paradigmes dans la littérature. On y trouva aucune relation entre l'approche instructionnelle et la formation des enseignant(e)s, les origines ou la formation des élèves, et le rendement académique des élèves. Ayant découvert que plus de 80% des enseignants et des enseignantes étaient de véritables éclectiques vis-à-vis leur enseignement suggère une évolution plutôt qu'une révolution dans l'enseignement de la lecture comme le croyent certain(e)s.

Although language arts instruction in some Canadian provinces has swung between progressive and conservative platforms over the last 10 years, instruction in British Columbia has maintained its progressive reputation (McConaghy, 1988; Simner, 1993). Two curricular innovations in the province in this decade (BC Ministry of Education, 1990, 1996) support literature-based, holistic approaches to instruction. These reforms have been met with controversy and concern by both the public and educators (Fennell, 1993). Given the uncertain coherence between any education ministry's directives and actual classroom instruction (Eisner, 1992), this study sought to describe reading instruction in BC. Teacher and student variables were also investigated to further understand instruction and its effects. Specific objectives of the study were threefold: (a) to identify factors that underlie reading instruction, (b) to describe groups of teachers based on these factors, and (c) to examine teacher and student variables of these teacher groups.

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Theoretical Background

Major theoretical frameworks for this study were drawn from two fields of study: teaching and reading instruction. These fields have regularly intersected such as during the large-scale process-product studies in the 1960s and in current teacher cognition research.

Teacher Cognition

In contrast to behaviorist views (Dunkin & Biddle, 1974), teacher cognition places teachers in control of whatever instructional approach they use by virtue of the knowledge they possess about both the subject area and pedagogy (Shulman, 1987). This perspective recognizes the epistemological validity of teachers' knowledge (Elbaz, 1983; Fenstermacher, 1994) and its essential role in educational change (Fullan, 1993; Goodlad, 1990). Current research of teachers' knowledge of literacy instruction challenges its theoretical integrity. It appears that such knowledge is more typically eclectic than reflective of any one perspective defined in the literature (Baumann & Heubach, 1994; Pressley, Rankin, & Yokoi, 1996). Although some reject the value of eclecticism (Edelsky, Altwerger, & Flores, 1991; Goodman, 1989), others view it positively and as an indication of teachers' "ability to deal with the incompleteness of any given theory and ... combine theories to construct meaningful interpretations that guide practice" (Moorman, Blanton, & McLaughlin, 1994, p. 319).

Literacy Instruction

Since the 1970s, developments from such fields as psycholinguistics, sociolinguistics, semiotics, constructivism, literary theory, and critical theory have fueled a longstanding debate between code-emphasis and meaning-emphasis approaches to reading (Carbo, 1988; Chall, 1989; Smith, 1994). Comparative reading research related to this debate centers on traditional (code-emphasis) and whole language (meaning-emphasis) approaches. A third perspective that has entered the arena is strategic reading. Positioned as a meaning-centered approach (Pressley, Harris, & Marks, 1992), strategic reading focuses on students' metacognitive control of higher-level reading strategies and the frequent need for direct instruction to accomplish this (Paris, Wasik, & Turner, 1991; Pearson & Fielding, 1991). In this study interpretation of teachers' knowledge of reading instruction is based on the three current approaches most discussed in the literature: traditional, whole language, and strategic reading.

Method

This study is a reanalysis of the 1990-1991 Reading Literacy Study of the International Association for the Evaluation of Educational Achievement (IEA). This section briefly describes the features of the IEA sample design and instruments used in this reanalysis. More detailed discussions of these matters can be found in Ross and Postlethwaite (1988) and the *IEA Reading Literacy Study Manual 1: Manual for Research Coordinators* (1990).

An international, stratified, two-stage cluster design sample defined the provincial sample as 154 schools, 154 teachers, and 2,813 grade 3 students. Instruments used in this study consisted of selected parts of the teacher questionnaire and student questionnaire, and the entire student reading achievement test. The teacher questionnaire contained conceptually related sections, each composed of several questions of one or more Likert-scale items. Several

of these sections were formulated to represent aspects of reading instruction and to reflect the longstanding divergent assumptions of the reading instruction field. Other sections of the teacher questionnaire pertain to teacher characteristics and teaching conditions. Items from the student background questionnaire used in this secondary analysis relate to reading activities and perceptions of learning to read. The student achievement test measured four domains of reading: word recognition, narrative comprehension, expository comprehension, and location of information.

Data Analysis

Factor analysis, cluster analysis, and analysis of variance were employed to answer the research questions. Details of the analysis and results can be found in Asselin (1995).

Factor analysis. Five aspects of reading instruction were conceptually defined based on five sections of the teacher questionnaire. The five aspects and the final number of items retained after analysis were Reading Activities (22 items), Instructional Strategies (16 items), Views of Reading Instruction (22 items), Assessment Methods (16 items), and Assessment Focus (10 items). To simplify the data on teachers' instructional practice maximally, first- and second-order factor analyses were conducted. First-order analysis was applied to each of the five defined aspects of reading instruction and secondary analysis to the resulting factors. For exploratory purposes, all analyses were subjected to principal components and image methods. Statistical criteria for retention of factors were eigenvalues >1.0 and a scree analysis. Interpretation was based on inspection of factor loadings and theoretical integrity. Primary loadings were regarded as .60 and above, and secondary loadings as .30 and above. Based on second-order factor scores, factor scores were then produced for each teacher.

Cluster analysis. Individual teachers' factor scores were transformed into standardized scores that were then used for clustering teachers. Specifically, a casewise hierarchical cluster analysis of individual teacher second-order factor scores was used to identify homogeneous groups of teachers, and Ward's method selected as the clustering criterion. Mean group scores for each of the second-order factor variables were then computed and profiles produced across each second-order factor.

Analysis of variance: Teacher background, student background, and student achievement. Following inspection of the teacher background variables, variables were recoded and transformation routines written and applied as required. Final analysis of teacher background was conducted on nine teacher characteristic and three classroom condition variables. Eight composite student variables were similarly constructed, along with aggregation at the teacher level. Three reading activity and five perception of learning to read variables were used in the final analyses of student background. Major preparation procedures for correlational analyses of student achievement consisted of data cleaning, scale transformation, and data aggregation at the teacher level. An inclusion rule of a minimum of 50% valid responses to all achievement items was applied, leaving 2,533 students. Following conversion of raw scores to standard scores, reliabilities and analyses of variance were computed.

Results

Factors of Reading Instruction: First- and Second-Order Factors

Although both image analysis and principal components analysis yielded similar results, intercorrelations produced for the latter were significantly higher. Inspection of several factor-number exploratory solutions revealed common themes across two or more factors. That is, a six-factor solution showed groups of factors were more theoretically related than discrete, thus suggesting further simplification of the data. In addition, inspection of eigenvalues of all five first-order factor analyses indicated either a sharp decrease between the second and third factors or a relatively small range of difference beginning with the third factor. For example, eigenvalues for the Reading Activities analysis were the following in order from the first to ninth factor: 6.77, 2.09, 1.66, 1.56, 1.38, 1.17, 1.08, 1.04, 1.0. Consequently, a two-factor orthogonal solution was deemed optimal in identifying both first- and second-order factors. Tables 1-5 display the results of the first-order factor analysis and Table 6 presents results of the second-order analysis. The results of the first-order analysis were rotated.

Names and definitions of the first- and second-order factors follow.

Reading Activities

Interactive Strategic: Students' frequent involvement in comprehension strategies in communicative contexts.

Basal-Controlled: Students' frequent involvement in systematic mastery of discrete language units.

Instructional Strategies

Direct Instruction: Teacher's frequent use of teacher-centered comprehension instruction.

Implicit Support: Teacher's frequent use of facilitative strategies embedded in a naturalistic view of learning to read.

Views of Reading Instruction

Systematic Program: Teachers' agreement with the effectiveness of using scope and sequence curriculum and teacher demand for accuracy to facilitate reading development.

Holistic Immersion: Teachers' agreement with the effectiveness of providing a rich literacy environment to facilitate reading development.

Assessment Methods

Open and Contextual: Teachers' preference to use a variety of informal reading situations to discover student needs in reading.

Closed and Constrained: Teachers' preference to use formal evaluative materials to discover students' needs in reading.

Assessment Focus

Narrow and Objective: Teachers' regular assessment of lower-level, codifiable units of language.

Broad and Subjective: Teachers' regular assessment of higher-level, difficult-to-codify units of language.

Strategic Whole Language (second-order factor)

An emphasis on higher-level comprehension strategies, student-centered learning, and holistic and authentic language use.

Table 1
Two Factor Analysis of Reading Activities

Variable	Factor	
	InterStr (24.2%) ^a	BasCon (7.5%) ^a
Making generalizations and inferences	.70	.07
Relating experiences to reading	.70	.06
Studying style or structure of text	.68	-.04
Looking for theme or message ^b	.67	.32
Making predictions during reading	.64	.05
Comparing pictures and stories	.60	.28
Summarizing reading	.55	.29
Reading other students' writing	.53	.25
Discussion of books read by students	.50	.18
Student leading discussion about passage	.46	.17
Writing in response to reading ^b	.45	.39
Learning new vocabulary incidentally	.40	.10
Dramatizing stories	.27	.60
Learning new vocabulary systematically	-.15	.59
Answering reading comprehension questions	-.01	.59
Learning letter-sound relationships	.10	.57
Diagramming story content ^b	.36	.53
Learning other word-attack skills	.12	.51
Listening to students reading aloud	.22	.50
Playing reading games ^b	.36	.46
Drawing in response to reading ^b	.32	.45
Reading plays or dramas	.17	.45

Note. InterStr=Interactive Strategic; BasCon=Basal-Controlled.

Variables with loadings <.3 on both factors omitted.

^aPercentage of variance in factor accounted for.

^bSignificantly loading items on both factors.

Programmatic Skills (second-order factor)

An emphasis on discrete skills through the use of teacher-centered instruction and a sequentially ordered curriculum.

Teacher Groups

Based on an optimal four-group solution, Table 7 presents mean variable scores for each of the two second-order factors, which were computed for each teacher group.

Examination of these profiles suggested the following constructs: Eclectic (42%), Conservative (17%), Progressive (25%), and Uncategorized (16%). The Eclectic group displayed average profiles across both factors. The Conservative group presented an average profile across Strategic Whole Language and a high profile across Programmatic Skills. The Progressive group displayed a high profile across Strategic Whole Language and an average profile across Programmatic Skills. The Uncategorized group revealed low profiles across both factors.

Table 2
Two Factor Analysis of Instructional Strategies

Variable	Factor	
	Dirln (23.5%) ^a	ImSup (11.6%) ^a
Ask questions to assess text comprehension	.79	-.11
Ask questions to deepen understanding	.74	.07
Show children how to understand a text	.73	.17
Compare stories, poems, fables, and tales	.58	.13
Frequency of teaching expository text	.57	.12
Maintain graded sequence of text difficulty	.55	.04
Frequency of teaching narrative text	.30	.08
Encourage parents to read to children	.00	.77
Encourage parents to be involved in the reading program	.09	.71
Encourage children to use the library more	.12	.68
Encourage children to read more	.14	.43
Use materials you have prepared yourself	.32	.50
Accessing prior knowledge ^b	.38	.41
Frequency of teaching document text	.10	.41
Ask children to describe their strategy for understanding ^b	.37	.40
Read aloud to children	-.06	

Note. Dirln=Direct Instruction; ImSup=Implicit Support

^aPercentage of variance in factor accounted for.

^bSignificantly loading items on both factors.

Group Differences on Measures of Teacher Background, Student Reading Experiences, and Student Achievement

All teacher background variables were tested as dependent variables with teacher groups used as independent variables. *F* values in this analysis ranged from .21 to 1.47, none of which was significant. All student reading experience variables were similarly tested resulting in *F* values ranging from .16 to 2.64, none of which was significant. Reliabilities of student achievement domains were computed using Cronbach's Alpha Measure of Internal Consistency and were as follows: Narrative .84; Expository .81; Document (location of information) .21; and Word Recognition .95. No statistically significant differences among teacher groups were found on any of the measures of student achievement: Expository ($F(3, 134) = 1.96, p<.05$), Document ($F(3, 134)=1.37, p<.05$), Narrative ($F(3, 134)=.68, p<.05$), Word Recognition ($F(3, 134)=.04, p<.05$). To test validity of these findings, Pearson correlations between achievement and first-order instructional factors were carried out. The overall low correlations from this analysis ranged from a high of .14 to a low of .30.

Discussion

Factors of Reading Instruction

Although a two-factor solution could appear to invite enforcement of a dichotomy found more in the literature than in the classroom, this was not the case. Especially in the first-order analysis, constituent variables of each factor were not consistently reflective of skills-based or meaning-emphasis perspec-

Table 3
Two Factor Analysis of Views of Reading Instruction

Variable	Factor	
	SysPro (16.0%) ^a	Hollm (11.8%) ^a
Reading materials should be sequenced in terms of language structures and vocabulary.	.72	.02
Teachers should always group children according to their reading ability.	.68	-.26
Every mistake a child makes in reading should be corrected at once.	.67	.10
When my pupils read to me, I expect them to read every word accurately.	.64	.07
Class sets of graded reading material should be used as the basis for the reading program. ^b	.61	-.34
Children should learn most new words from lessons designed to enhance their vocabulary.	.56	.05
Comprehension assignments should be marked carefully to provide them with feedback.	.52	.22
9-year-olds should not have access to books they will read in the next year at school. ^b	.47	-.37
Children should not start a new book until they have finished the last.	.46	.19
Most of what a child reads should be assessed.	.43	.26
Teachers should carefully follow the sequence of the textbook. ^b	.43	-.38
Children should take a book home to read every day.	.02	.65
Teachers should keep careful records of every child's reading progress.	.18	.52
Children should be read to every day by the teacher from a story book.	-.14	.47
Parents should be actively encouraged to help their children with reading.	.04	.45
Children should be encouraged to read texts they have written	-.11	.43
A word recognition test is sufficient for assessing children's reading levels.	.28	-.42
Children should always understand why they are reading.	.25	.41
All children should enjoy reading.	-.10	.39
Children should always understand what they are reading. ^b	.35	.39
Children should not be encouraged to read a word they don't know.	.04	-.36
Children should undertake research projects to improve their reading.	-.06	.35

Note. SysPro=Systematic Program; Hollm=Holistic Immersion. Variables with <.3 loadings on both factors omitted.

^aPercentage of variance in factor accounted for.

^bSignificantly loading items on both factors.

tives. Rather, the meaning of several variables in each of the five sets of two factors was initially unclear. Careful study of the relative factor loadings, along with a more holistic examination of the factor variables, facilitated meaningful interpretation.

Reading activities. Knowledge of how students spend their instructional time provides one window into student outcomes (Doyle, 1983). The two Reading Activities factors could indicate not only the activities teachers privilege, but

Table 4
Two-Factor Analysis of Assessment Methods

Variable	Factor	
	OpCont (21.5%) ^a	CICon (14.7%) ^a
Listening to students reading aloud ^b	.63	.34
Interviews ^b	.62	-.30
Records of student interests	.60	-.21
Oral discussions	.60	.11
Knowledge of students' reading interests	.60	-.25
Listening to students reading	.57	.26
Oral questions on material read ^b	.53	.31
Informal observation	.50	.03
Written open-ended questions on material read	.46	.15
Exercises and tests in workbooks and text books	-.21	.74
Multiple choice questions in reading	.04	.63
Tests in workbooks and textbooks	-.08	.63
Standardized or formal tests of comprehension	.13	.46
Teacher-made vocabulary tests	.26	.41

Note. OpCont=Open and Contextual; CICon=Closed and Constrained.

^aPercentage of variance in factor accounted for.

^bSignificantly loading items on both factors.

could also point to conceptions of reading students may be forming: as higher level thinking and purposeful communication, or as discrete skills mastery (Fisher & Hiebert, 1990).

The Interactive Strategic factor's emphasis on development of students' comprehension strategies suggests the influence of current research in comprehension instruction in the classroom in contrast to the past lack of such instruction (Dole, Duffy, Roehler, & Pearson, 1991). The secondary focus on both the social dimensions of language development and language integration in this factor connotes a coming together of approaches sometimes considered antagonistic, but that some propose will ensure the evolution of whole language (Pearson, 1989; Smith & Wham, 1993).

Although many of the variables of the Basal-Controlled factor are associated with traditional instruction, others are aligned with strategic reading, also a feature of new basal programs (Hoffman et al., 1993). Variables significant to both factors (e.g., writing in response to reading) seem to reinforce the view that the same activities can be diversely interpreted, thus lending support to the notion of the critical role of the teacher's theoretical perspective in shaping practice (Edelsky et al., 1991; Grossman, 1990).

Instructional strategies. Initial interpretation of the Direct Instruction factor suggests that teachers are adopting recommendations of current comprehension instruction research. However, the significant loading of graded materials on this factor could mean that the instructional strategies stressed in this factor are aligned with behaviorist rather than cognitive or constructivist views of comprehension instruction. In contrast, the Implicit Support factor seems to

Table 5
Two Factor Analysis of Assessment Focus

Variable	Factor	
	NarOb (42.1%) ^a	BdSub (14.9%) ^a
Word recognition	.83	.15
Vocabulary	.80	.04
Decoding	.77	.10
Phonic skills	.73	.08
Text comprehension ^b	.66	.34
Sentence understanding ^b	.57	.43
Reading study skills ^b	.53	.33
Use of background knowledge	.10	.83
Literary appreciation	.06	.83
Amount of reading	.23	.61

Note. NarOb=Narrow and Objective; BdSub=Broad and Subjective.

^aPercentage of variance in factor accounted for.

^bSignificantly loading items on both factors.

represent the facilitative strategies identified in the emergent literacy research (Harste, Woodward, & Burke, 1984; Heath, 1982; Wells, 1986). The significant loading of two explicit strategies on this factor may reflect a move in the literature toward endorsement of the use of more overt instructional strategies in meaning-centered instruction (Pressley et al., 1992; Spiegel, 1992).

Views of reading instruction. Items in this factor relate both to teachers' understandings of reading development and ways to support that development. Given the proposed influence of teachers' thinking about their subject matter on their instructional practice (Grossman, 1990; Shulman, 1987), factors of Views of Reading Instruction could indicate significant determinants of a system's reading curriculum. In the Systematic Program factor, the importance of highly structured reading materials connotes a task-analytic approach to teaching reading and a scope and sequence order of instruction, with skills mastery as the gatekeeper to progression. The high demand for word-level accuracy is consistent with the primary emphasis on mastery of small units of language in traditional instruction. In sum, the Systematic Program factor appears to feature the hallmarks of effective reading instruction identified by earlier process-product research (Rosenshine & Stevens, 1984). In contrast, Holistic Immersion is primarily characterized by beliefs in the value of independent reading, and secondarily by adult-modeled reading, exposure to model texts, reading-writing connections, and metacognitive awareness. As with some other factors discussed above, Holistic Immersion seems to point to a synthesis of whole language and strategic reading.

Assessment methods and assessment focus. Given the adage that assessment drives the curriculum, the factors of Assessment Methods and Assessment Focus may also be particularly revealing. The Open and Contextual factor, with its emphasis on student interests, reading processes, and open-ended interactions between student and text and between student and teacher suggests a

Table 6
Results of 2nd Order Factor Analysis

Variable	Factor	
	StrWL (30.8%) ^a	ProSk (22.5%) ^a
Interactive Strategic Reading Activities	.79	.08
Broad and Subjective Assessment Focus	.71	−.03
Open and Contextual Assessment Methods ^b	.71	.37
Holistic Immersion Views of Reading Instruction	.69	.07
Implicit Instruction	.65	−.18
Narrow Objective Assessment Focus	.15	.69
Direct Instruction ^b	.39	.68
Closed and Constrained Assessment Methods ^b	−.36	.67
Systematic Program View of Reading Instruction ^b	−.30	.64
Basal-controlled Reading Activities	.16	.62

Note. StrWL=Strategic Whole Language; ProSk=Programmatic Skills.

^aPercentage of variance in factor accounted for.

^bSignificantly loading variable on both factors.

reading program supportive of motivational, social, and cognitive dimensions of reading. In contrast, the Closed and Constrained factor implies a program dependent on worksheets and tests, a feature of the deskilled view of teaching (Shannon, 1987). As with factors of Reading Activities, common variables could illustrate the importance of the role of perspective. For example, oral questions can be used to assess students’ accurate recall of passage content or, in a meaning-based perspective, as a way of scaffolding comprehension development.

The strong emphasis on word recognition and vocabulary in the Narrow and Objective factor of Assessment Focus is not surprising given that teachers of beginning readers in general highlight small units of comprehension, regardless of approach (Dahl & Freppon, 1995; McCargar, 1994). Current perspectives uphold balanced instruction rather than an either-or answer to the importance of large and small units of language, a view represented by the Balanced Reading Instruction special interest group of the International Reading Association. Other issues central to the great debate embedded in the two factors of Assessment Focus concern validity of outcome criteria (McKenna, Robinson, & Miller, 1990; Shannon, 1994) and the relative order and importance of language units in the reading process (Goodman, 1985; Gough, 1985).

Strategic whole language and programmatic skills. Given the assumption that teachers teach from an overarching framework (Duffy & Anderson, 1984; Grossman, 1990) rather than holding one perspective on assessment methods, another on instructional strategies, yet another on reading development, and so forth, the second-order factors were intended to represent a more valid description of approaches to reading instruction.

Together the variables constituting the Strategic Whole Language factor suggest an approach consistent with the holistic, meaning-centered instruction described in the whole language literature. However, of particular interest is

Table 7
Mean Scores on 2nd-Order Factor Variables by Teacher Group

<i>Factor</i>	<i>Pure Eclectic (n=64)</i>	<i>Basalized Whole Language (n=27)</i>	<i>Conservative Whole Language (n=38)</i>	<i>Uncategorized (n=25)</i>
<i>Strategic Whole Language</i>				
InterStr	-.37	.35	1.03	-.99
BdSub	-.22	-.30	1.02	-.68
OpCont	.03	.36	.62	-1.40
Hollm	-.37	.37	.63	-.40
ImSup	-.18	-.01	.49	-.27
<i>Programmatic Skills</i>				
NarOb	.09	.90	-.07	-1.11
Dirln	-.34	1.32	.32	-1.04
ClCon	.18	.93	-.60	-.56
SysPro	.22	.84	-.76	-.33
BasCon	-.08	.96	-.21	-.52

the inclusion of features associated most with strategic reading. The strong loading of Interactive Strategic Reading Activities appears to reinforce the trend noted earlier toward encouraging integration of holistic and strategic approaches to literacy instruction. Similarly, the low but significant loading of Direct Instruction, in addition to the stronger-loading variables representative of a belief in naturalistic development, suggest this factor represents some use of explicit strategy instruction in rich and authentic language contexts.

Programmatic Skills appears to represent behaviorist notions of effective reading instruction and the continuation of scope and sequence approaches to reading instruction. Some argue that traditional reading instruction, which embodies these two perspectives, has maintained its position in the classroom more as a culture of beliefs than as a body of research (Goodman, Shannon, Freeman, & Murphy, 1987). Central features of this factor include instruction focused on easily codifiable skills, a task-analytic view of reading instruction, and curriculum controlled by the program and/or teacher. Recent studies (Baumann & Heubach, 1994, Hoffman et al., 1993) show that new basal series embody a number of principles found in the current literature. However, variables of Programmatic Skills seem to point to beliefs and practices associated with past basals. At stake is not the use or nonuse of basals, but the accompanying thinking and practices. For example, instruction of comprehension skills seems important in this factor although it appears that students' activities are limited to close-ended practice of discrete skills.

In sum, underlying dimensions of the two secondary factors of grade 3 reading instruction in BC appear to reflect issues and trends in the literature on literacy. The Programmatic Skills factor suggests that teacher-centered instruction continues (Cuban, 1984) along with beliefs in hierarchical skill mastery (Langer & Allington, 1992). On the other hand, the suggestion of an integration of two meaning-centered perspectives in the Strategic Whole Language factor

corresponds with proposals for literacy instruction based on syntheses of different perspectives (Cazden, 1992; Hemysfeld, 1989; Spiegel, 1992).

Teachers' Instructional Profiles

Although the four groups of teachers differ to some degree on all 10 variables of the two second-order factors, between-group differences are most pronounced on two variables: Interactive Strategic Reading Activities in Strategic Whole Language and Direct Instruction in Programmatic Skills. One possible explanation of the distinguishing role of Interactive Strategic Reading Activities is the recency of strategic reading emphases in the literature and classroom. Comparative findings from the 1993 provincial assessment of reading based on reported (BC Ministry of Education, 1993a) and observational (BC Ministry of Education, 1993b) data are noteworthy here. Although 99% of BC's primary teachers ranked activities that promoted independent strategies for reading comprehension as important, observation revealed that, in practice, these types of activities accounted for only between 16-25% of reading instruction and assignments. Together these findings indicate an actual conservative emphasis on strategic reading.

The other differentiating variable in the teacher groups, Direct Instruction, invites inquiries into teachers' perspectives. Direct instruction can be carried out in a behaviorist or a constructivist perspective. Again, the 1993 provincial assessment found that 91% of primary teachers rank activities focused on the use of phonics and word structure as important, thus leaving open teachers' interpretation of direct instruction.

Another noteworthy between-group finding is that the majority of teachers neither exclusively emphasize a broad focus of assessment nor absolutely reject a narrow focus of assessment. This could mean that most reading programs promote an interactive view of reading (Ruddell & Speaker, 1985; Rumelhart, 1994) with emphasis on the more measurable elements of reading. This interpretation is corroborated in the 1993 provincial assessment, where primary teachers reported the percentage of evaluation time they gave to the following aspects of reading: comprehension 99%, oral reading 99%, vocabulary 96%, specific word attack skills 94%, prior knowledge 79%, and specific comprehension strategies 70%.

Comparison of between-group profiles revealed that no one group of teachers is completely representative of either perspective of reading instruction represented in the Strategic Whole Language or Programmatic Skills factors. Rather, all groups but the Uncategorized group represent various degrees and compositions of eclecticism. The fact that three of the four groups, or 84% of teachers, are somehow eclectic in their views and practices of reading instruction is consistent with other studies from BC (Froese, 1995; Scott & Butler, 1994) as well as with pragmatic views of teaching (Moorman et al., 1994). It appears that exclusive conformity with one perspective, at least as defined in this study, is more of an ideal than a reality.

Finding that eclecticism is the norm raises questions about the validity of labeling certain school systems as representative of one approach over others. Findings from this study do not support BC's reputation as a whole language province. In this study even the highest scoring group on the meaning-centered factor had average scores on the basal, skills-based factor. Overall, grade 3

teachers in the province appear to be using some meaning-based practices in various degrees of conjunction with basal programs.

Although this study did not measure change, hypotheses about the direction of change can be offered based on combined findings from this study and the provincial assessments (BC Ministry of Education, 1988, 1993a, 1993b). Comparative findings of grade 4 reading instruction (comparisons of primary were unavailable) indicate a trend toward increased use of literature, small-group work, independent projects, journals, and teacher read-alouds, and a significant decrease in the use of workbooks and other commercial materials. The portrait of instruction derived from the IEA data seems more conservative than that in the provincial assessments, based on report data but more aligned with that gained from observation.

In closing this discussion of reading instruction factors and teacher groups found in this study, some limitations need to be mentioned. Although broad distinctions between skills-based and meaning-centered approaches may be valid distinctions at the international level, such widespread divisions do not necessarily permit detection of variance within and across approaches. Such variations are common in educational systems such as BC's where local educational, social, and political developments have influenced teachers to form alternative or more complex approaches to reading instruction than the dichotomies proclaimed in the literature. Thus the broad conceptual basis of reading instruction underlying the items used to derive the description of reading instruction in this study needs to be considered when interpreting findings. Questionnaire items developed to capture local variables of reading instruction could have produced a different description.

Similarly, although results of the factor analyses were interpreted in light of three, not two, perspectives of reading instruction, other perspectives exist. However, interpretation of the instructional data was at best suited to three alternative perspectives, leading to a possible incompleteness of the model. In sum, the theoretical frameworks circumscribed by the questionnaire items as well as the usual limitations of survey data must qualify interpretation of both the factors of reading instruction and the teacher groups.

Teacher Background, Student Background, and Student Achievement

The major finding of no significant differences among teacher groups on teacher background variables appears to refute growing evidence of contextual factors on instructional practice (Freeman, Freeman, & Fennacy, 1993; Richardson, Anders, Tidwell, & Lloyd, 1991; Walmsely & Adams, 1993). Again, these findings need to be interpreted in light of the broadly defined IEA teacher background variables. With that caveat, one may cautiously conclude either that teachers' instructional practice is independent of teacher background or, more plausibly, that there are other personal and contextual variables of instructional practice, and, furthermore, those variables may be more clearly identified when investigated with other research methods.

It was unexpected that none of the student reading experience or perception of learning to read variables correlated significantly with any of the teacher groups. Recent research shows the influence of social interchanges around the meanings of books and strategy instruction on students' amount and breadth of reading activity (Guthrie, Schafer, Wang, & Afflerbach, 1995; Morrow, 1992).

Yet in this study, students of those teachers who had high scores on the Interactive Strategic variable did not significantly differ on any related variables (voluntary reading, school reading, or reading interactions out of school). Similarly, one could expect students in these classes to report high ratings of themselves as readers as well as high affective and cognitive perceptions of reading acquisition as has been found in other studies (Dahl & Freppon 1995; Shapiro & Witte, 1991). However, it must be remembered that the four types of instructional practice identified in this study represented eclectic rather than pure versions of either perspective defined by the Strategic Whole Language and Programmatic Skills factors. Perhaps contrasts between teachers' instructional approaches in this study were not bold enough to permit identification of conceptual and affective differences between instructional approaches documented in the literature. In addition, wide student variance in individual classes possibly prevented identification of teacher effects.

Finally, one could simplistically interpret the lack of relationships between instruction and achievement to indicate the effectiveness of a number of approaches of ensuring students' acquisition of basic reading skills. A recent comparison of basal and child-centered, literature-based approaches in two countries (Froese, 1995) concluded that "similar achievement can be obtained by quite different educational curricula" (p. 183), echoing findings of the first grade studies (Bond & Dykstra, 1967). However, other considerations related to content validity and type of proficiency measures used in IEA research help illuminate findings from this study.

First, regarding content validity, the student reading achievement test was intended to represent the "knowledge and skills required by a literate society and/or valued by an individual." Some notable features of the achievement measure relate to passage content, text type, passage length, and question types. Despite these advancements, the compromising nature of the construction of an international test resulted in a measure that some argue is more closely aligned with basic reading skills (McLean, 1990) than the types of processes and behaviors set forth in the literature as meaningful indicators of literacy achievement (International Reading Association and National Council of Teachers of English, 1996). Consequently, interpretation of findings about the influence of instruction on student achievement must keep in mind the specific notion of achievement represented in the student test.

Second, assumptions about the superiority of meaning-based approaches seem difficult to test because of the type of research measures used. Few studies have provided convincing evidence of this relationship, including the IEA Reading Literacy Study (Elley, 1992). However, some current studies now show the effectiveness of meaning-based instruction on student literacy development when multiple measures over time are used (Dahl & Freppon, 1995), whereas others continue to find no differences (McKenna, Stratton, Grindler, & Jenkins, 1995). It is possible that following such recommendations as use of longitudinal data (Husen, 1978), multiple and diverse measures of literacy development (Hoffman, 1986), and more valid measures of instruction (McLean, 1990) would produce significant effectiveness findings for approaches recommended in the literature.

Implications and Directions for Future Research

One major implication that may be drawn from this study concerns teacher development. Current views in the study of teaching assume that teachers' existing knowledge and beliefs serve as filters through which rich and more appropriate conceptions may develop (Borko & Putnam, in press). It follows that successful curriculum development must be premised on what teachers already know (Fenstermacher & Richardson, 1993; Richardson, 1990). Adhering to this principle minimizes the likelihood of teachers' negative reactions to change and increases the possibility that teachers will use new policies and curricula as scaffolds for their professional development. Thus during provincial curriculum planning and implementation, findings from this study could provide reference to what is already familiar to teachers, as well as anchor points from which to carry out such support services as inservice training. For example, knowing that teachers are beginning to incorporate higher-level comprehension strategies into their reading programs could be the basis of professional development aimed at guiding teachers toward embedding strategy instruction in a constructivist framework. Along with provincial assessments, findings from this study may serve as a benchmark for future provincial assessments of reading instruction. Specifically, such a research focus would be able to detect patterns of instructional change, as well as whether eclecticism or transitionalism best describes teachers' evolution. It is these applications of comparative literacy research that can be most useful (Stahl, Higgenson, & King, 1993).

A second major implication and direction for future research that can be drawn from this study relates to validity of research instruments. Based on the pivotal role of validity in any type of research, methodologists argue for broader and deeper perspectives of validity (Messick, 1989). The high profile of international assessment magnifies the critical role of valid research instruments. Although the description of reading instruction produced in this study provides insight into the substantive aspects of teacher development, the lack of effect of any of the teacher background variables on instruction suggests implications about procedural aspects. Literature in the study of teaching, particularly studies of teacher change, have identified the influence of more complex and more subtle factors than those available for investigation in this study. Factors that positively influence teacher development include feelings of ownership and control, and programs in which theory is scaffolded onto practice and where traditional expert and follower roles are mutually replaced with that of co-learners (Duffy, 1993; Fenstermacher & Richardson, 1993; Richardson, 1990). These kinds of principles most effectively support teacher development (Borko & Putnam, in press).

Although some limitations of the student outcome and instructional measures are discussed, several points can be added. In terms of instructional measures, instruments should avoid being grounded in simplistic dichotomies, ensure that information about the coherence of teachers' philosophy and practices can be obtained, and extend underlying conceptions of reading from reading as part of the language arts to reading across the curriculum. In terms of proficiency measures, findings from this study point to the need for assessment studies to go beyond measures of basic reading skills. Given the high

profile accorded to comparative achievement scores in the public literature, it is especially important that assessment be based on a range of cognitive and affective indicators as defined by the literature of reading, and should be collected over time, as is being done in some recent IEA studies. Efforts to obtain theoretical congruence between literacy curriculum and literacy assessment in large-scale assessment studies are being made, as seen in the 1994 School Achievement Indicators Program (SAIP) in Canada, and the 1996 National Assessment of Educational Progress (NAEP) in the United States. These efforts need to be emphasized and continued so that theoretically valid assessment drives the curriculum at both the levels of the classroom and the educational system.

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The *Note* should report briefly on the author's/authors' research-in-progress or recently completed research and should feature work that has not been reported elsewhere in journal publications. This current work should be situated, briefly, in the context of other pertinent scholarship, including the author's or authors' related research. The focus of the *Note* could be either a specific study or inquiry or an overview of an ongoing line of inquiry where fuller reporting of results will not occur in print for some time. The maximum length for a *Note* is 1,000 words (about 4 double-spaced pages in standard 12-point type), excluding references and one or two tables or graphs. To encourage communication between researchers, authors of *Research Notes* are asked to provide contact information such as e-mail, fax, and/or telephone numbers for publication with each *Note*. No abstract is required, but in all other respects the usual *ajer* guidelines for manuscripts should be observed.

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The Effects of Early Oral Language Skills and Other Measures on Subsequent School Success: A Longitudinal Study

Introduction

A common problem with research on student success in school is the difficulty of investigating the effects of variables over time. Although longitudinal research is a preferred method to examine nonmanipulable variables such as aptitude, gender, or age (Biddle & Anderson, 1986), conducting such research presents important problems. Threats to validity of longitudinal research as identified by Campbell and Stanley (1963) include maturation, history, experimental mortality, and various interaction effects. As well, there is the practical difficulty of sustaining researcher interest and energy over time. Despite the difficulties there seems to be a growing interest in longitudinal research; for example, Statistics Canada (1996) is conducting a National Longitudinal Study of Children and Youth to provide information on a number of factors related to child development and well-being.

Factors that predict school success are important for educational policy makers and school officials. Although many factors may influence school achievement directly or indirectly, longitudinal studies typically investigate only a few factors and often only for a few years. For example, two factors, oral language and entrance age, have been investigated as predictors of school success (Juel, Griffith, & Gough, 1986; Loban, 1976; Wilgosh, Meyer, & Mueller 1995). These studies, however, have produced differing results (Biemiller, 1983; Erion, 1987; Jones & Mandeville, 1990). This suggests the need to conduct research with more variables over longer periods of time.

Purpose of the Study

The primary purpose of this study is to investigate the effects of early oral language skills, entrance age, problem behavior, and school attendance on student achievement over time.

Procedures

This study was undertaken with a random sample ($n=200$) of kindergarten students in a mid-sized western Canadian school division. Data were collected

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on the students at five different grade levels: kindergarten, grade 1, grade 2, grade 3, and grade 7, and will also be collected prior to students' graduation from high school. Information was collected on age at school entry, school attendance, gender, problem behavior, oral language skills, and school achievement. Of the original sample 110 participants remained for the grade 7 data collection. An additional 8 students had repeated a grade, so that the total available sample at grade 7 was 118 students, although only data on the 110 students in grade 7 were used in the study. The loss of 82 students from the original sample is a rate of attrition similar to that reported in other such studies (Wilgosh et al., 1995).

Oral language skills were measured in kindergarten using the Test of Oral Language Development 2 Primary (Westby, 1988) and problem behavior was measured using the Walker Problem Behavior Identification Checklist (Walker, 1983). Cognitive ability was measured in grade 3 using the Test of Cognitive Skills (CTB/McGraw-Hill, 1981). Academic performance was measured using both a teacher rating scale and a standardized achievement test, the Canadian Test of Basic Skills (Nelson Canada, 1984) at each of grades 2, 3, and 7. Chronological age was the actual age (in months) as of January in each year, and attendance was actual days in school at the time of testing. To examine differences between students who were considered successful in school and those considered unsuccessful a document analysis was also conducted at grade 7. The 110 students were ranked by academic achievement based on both CTBS scores and teacher ratings; the document analysis involved the 10 highest achieving and the 10 lowest achieving students.

Results and Discussion

During the first eight years of the study results have been analyzed and reported on two occasions. Noonan (1991) investigated the relationship among oral language, age, gender, problem behavior, and attendance from kindergarten through grade 2. The results showed that chronological age and school attendance were not significantly related to oral language skills. Problem behavior was a significant predictor of oral language skills, and gender was significant for some skills insofar as girls possessed higher levels of some skills. The results with respect to oral language and problem behavior are similar to the result from some of the reports of the national longitudinal study (Statistics Canada, 1996).

In a follow-up study at grade 7, Noonan, Yackulic, and Hildebrand (1996) found that the differences in oral language performance in kindergarten, grade 1, and grade 2 were related to differences in school achievement in grade 7. Generally students who performed poorly on early oral language measures also performed poorly on both standardized (e.g., CTBS) and nonstandardized (e.g., teacher ratings) measures of school performance in grade 7. Age at school entry was not related to differences in school achievement in later years. These results are in contrast with the findings of other researchers (Wilgosh et al., 1995; Crosser, 1991) who reported that younger children at a particular grade were typically less successful than older children in the same grade.

The document analysis of the 10 highest achieving students provided additional information regarding these students' school histories. The 10 high-

achieving students in grade 7 had demonstrated strong oral language skills during their early school year; only one student's record indicated a teacher's concern about school performance. All 10 students were described as being excellent or very good students, and 7 of the 10 were described as being student leaders. Most of the 10 students also demonstrated superior talent in other areas such as extracurricular, music, or sports programs, and all the students were described as having stable, supportive families.

The 10 low-achieving students presented quite a different profile. Five of the 10 students were diagnosed as learning disabled, and four were described as exhibiting problem behavior, although none was diagnosed as extremely behaviorally disordered. Typically these students did not participate successfully in school activities and had difficulty relating to peers.

Continuing the Study

Tracking a sample of students through the first eight years of school has provided information on factors that affect students' school success. The results here suggest that the nonmanipulable variables of age and gender are not necessarily predictors of success. However, early problem behavior and early oral language skills appear to predict subsequent school success, particularly in the early school years.

Several questions will direct the continuation of this longitudinal study. What is the relationship between school success in early grades and success in high school? What are the effects of age, gender, and attendance on completion of high school? To what extent did early oral language skills predict success in high school? Students who repeated a grade were not part of the grade 7 sample; it will be of interest to investigate the effects of grade retention on their future school success. Answers to these and other questions will help teachers and administrators become more aware of the factors that affect student success today and may have implications for early intervention and other programs.

Acknowledgments

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Reforming UK Initial Teacher Training: Roles and Frames for Analyzing Teaching

Britain's Conservative government policies have changed initial teacher education in three ways: (a) the teacher training curriculum is defined as the attainment of government defined competences (teaching skills); (b) prospective teachers are required to spend up to 66% of their teacher training in schools; and (c) school-based mentor teachers take on the primary role for preparing and instructing student teachers (Gore, 1995; Maynard & Furlong, 1995).

The policies prompted a flurry of research about roles and programs in the British teacher education institutions, which do have implications for teacher educators in other countries. The following examines the new roles and new frames for analyzing teaching in Exeter's school-based teacher training program (University of Exeter, 1995-1996).

Three research studies that investigated mentoring in initial teacher education provide a survey of key themes explored (McIntyre & Hagger, 1994). Maynard and Furlong (1995) found little difference between the contributions of the supervisor and mentor. These researchers called for more understanding of teachers' professional knowledge and how to deploy it in classrooms. While researching mentorship in primary teacher education, Yeomans (1994) found the dimensions, dominant strategies, and required relationships of effective mentors. Although he discovered some role differences for mentors and supervisors, he concluded that to be more effective the partners needed clear, written guidelines about what each partner could expect from the other. Finally, Dart and Dart (1993) tracked new and experienced mentors paired in a well-established school-based scheme. These researchers concluded that neither schools nor the university have sufficient time or resources to attend to all the demands satisfactorily. Overall, these studies demonstrate that mentoring is a complex task not easily undertaken by the experienced teacher, and that many teachers experienced in supervising student teachers anticipate little need for change (McIntyre & Hagger, 1994).

To determine the intended features of the model, I studied documents, and interviewed experienced mentors in two schools and four university educators who had researched, developed, and implemented the Exeter model. Then the Exeter placement officer helped me select two rural and two urban primary student teachers as respondents. Next I observed, took field notes, and audiotaped these female student teachers as they instructed, then discussed their teaching with their four respective school mentors and two university

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supervisors. All data were transcribed to computer disk and collated under emerging themes.

Exeter model developers concluded that if school mentors were the best people to teach skills such as classroom management, then university supervisors should enhance teacher thinking. School staff would focus on student teacher performance while university supervisors would scaffold student teacher learning by providing the cognitive rather than skill apprenticeship (Harvard & Dunne, 1992).

Differentiated Roles

The model differentiates the roles of the three student teacher supporters. The cooperating teacher provides daily informal feedback about the student teacher's teaching performance in the classroom. In two conferences per term the mentor teacher links to classroom practice in the whole school after examining records kept by the student teacher on planning and performance. The university supervisor meets with the student teacher twice each term, examines student teacher records, and through critical questioning focuses on teaching thinking beyond the classroom and school.

Dimensions of Teaching and Levels of Teaching Competence

The Exeter team selected skills similar to North American lists of teaching competences (Darling-Hammond & Sclan, 1992; Good & Brophy, 1994; Powers, 1992) as their dimensions of teaching competence. They included (a) direct instruction, (b) guided practice, (c) structured conversation, (d) management of materials, (e) management of order, (f) planning, (g) monitoring and assessing students, (h) teacher self-evaluation, and (i) classroom climate.

They thought of competence for the raw recruit and for the seasoned teaching veteran. They realized that competence was a dynamic concept that could be described at three levels for each of the nine dimensions. Student teachers use the levels to set goals for increasingly complex teaching.

Instructional Design

They also began to think how other variables fitted into a wider instructional design. In this design they recognized that any example of teaching could have links to the dimensions of teaching, curriculum, children's learning, subject knowledge, teaching lore, and educational theory.

Three Questions Shape Critical Argument

Finally, using records of student teaching observations, the university supervisor or in-school teacher mentor promotes student teacher thinking by asking What? So what? Now what? These reflective questions cause the student teacher to describe what happened in the teaching, analyze and draw conclusions about the episode, and then plan for alternative or future instruction.

Features of the model that have been successfully implemented included: (a) using the dimensions of teaching and levels of competence to set student teaching goals; (b) making connections to all the elements of the instructional design except theory; and (c) asking the three questions causing student teachers to describe, analyze, conclude, and plan for future teaching.

Features of the model that were problematic include: (a) lacking role distinctions between mentors and university supervisors; (b) finding the dimen-

sions and levels matrix got between one university supervisor and his student; and (c) explaining why one mentor did not link theory to practice saying, "We're at the chalk face, where it's actually happening. We are responsible for the teaching bit, not theory."

Discussion

Although the model provides role differences and several frameworks for analyzing teaching, several aspects need refinement or reexamination. First, as in Yeomans' (1994) finding of unclear role distinctions, these mentors and supervisors overlapped their roles. Training, overcoming resistance to change, and time to discuss ways of complementing the others' tasks are needed. Second, although the frameworks are helpful guides to student teacher assessment and goal setting, they may interfere with responding to student teachers' dilemmas in their particular contexts. Third, the mentor who felt responsible for teaching, not theory, supports the McIntyre & Hagger (1994) finding that mentor teachers anticipate little need for change. Mentors need to participate in training.

The Exeter model invites questions that may guide Canadian educators as they continue to develop school-based teacher education.

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Book Reviews

Debating Dropouts: Critical Essays and Research Perspectives on School Leaving. D. Kelly & J. Gaskell (Eds.). New York: Teachers College Press, 1996.

Reviewed by *Raymond Downie*

Almost everyone involved in educational practice, research, or policy decisions has been affected in some way by the renewed interest in school dropouts and the widespread national attention to the "dropout crisis." It is not merely a coincidence that early school leavers are also now being portrayed not only as victims of their own poor choice, but as potential destroyers of the economic viability of the nation.

Debating Dropouts: Critical Essays and Research Perspectives on School Leaving is a compilation of 10 essays by scholars representing a range of disciplines in both Canadian and United States universities. This book, which also includes contributions by co-editors Deirdre Kelly and Jane Gaskell and a foreword by Michelle Fine, examines and deconstructs the dominant discourse about early school leavers that has been developing in both Canada and the US. The essays serve to illuminate the "panic" that has emerged about the possible effects of school dropouts on global economic competition and the resulting influence on official policy.

The first set of essays explores the dominant stance of current policy in North America. The remaining two sections examine the relation between the dominant discourse and the researchers who are studying the process of leaving school. The authors present early school leaving through various lenses, reframing the conversation about marginalized groups.

Part I establishes the framework for examining the implicit assumptions that permeate the dominant discourse about early school leaving and underpin policy decisions in both Canada and the US. Authors Dehli, Rubenson, and Lesko each encourage us to reflect on the language used to describe this concern and the sense of urgency that has been created to correct this crisis.

Dehli analyzes the text of three recent reports that have been instrumental in framing the dropout issue in Canada: *A Lot to Learn* (1992) and *Education and Training in Canada* (1992) published by the Economic Council of Canada and *Learning Well ... Living Well* (1991) published by the Ministry of Industry, Science and Technology in partnership with the Ministry of International Trade and the Ministry of Employment and Immigration. She illustrates how these documents have narrowly defined the "story" on dropouts as a story

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about the relationship between education and employment, simplifying how issues are framed and what solutions are recommended.

How our concern with early school leavers would change if education were considered as a recurrent process throughout life is the question raised in Rubenson's essay. It is in the direction of lifelong learning or "dropping out and dropping back in" that Rubenson takes the examination of early school leaving. He demonstrates that lifelong learning has become narrowly defined since discussions in the 1960s. Framed by the new economic imperative, lifelong learning, as it appears in public policy documents, has shifted from a utopian imperative linking education to opportunity and social equality to a notion restricted to the perceived demands of the economy, failing to consider the "prerequisites or hindrances to fostering a lifelong learning culture."

Lesko explores another aspect of the narrowing of the dominant discourse on early school leavers. Arguing that the term *at-risk youth* has come to include at risk of not moving toward independence (having a job), Lesko describes how this pathological fear of dependence has polarized ideas of independence and dependence into notions of good and evil. She examines how schools have responded based on simplistic, selectively applied, and polarized notions of dependence and independence that do not take power relations into account—youth are dependent or independent, at risk or successful, requiring special programs or regular programs.

Part II shifts from exploring the dominant discourse to how this stance shapes the kind of research that is done, the questions that are asked, and, ultimately, the "truths" that are discovered. In their introduction to this section Kelly and Gaskell aptly describe the responsibility for the researcher to move beyond merely reinforcing the dominant discourse. "By both accepting the dominant frame and by trying to contest it, researchers become part of the politics of discourse around school leaving.... This makes the way they frame their research, and whose questions they ask, a matter of political as well as academic import—and one of responsibility" (pp. 61-62).

Krahn and Tanner take a crucial look at the marginal employment experienced by early school leavers. Although they describe various findings from their research, their description of the participants' views of the values of education and future plans is especially significant with respect to other essays in this book. Krahn and Tanner report that leaving school has not meant a rejection of education for most of the participants. Most stated that they planned to continue their education at some time in the future. They appear to view the high school diploma and future education, as described by one participant in a study completed several years ago (Downie, 1994), as the "ticket to a happy and successful life." A valuable contribution of the Krahn and Tanner study is its implications for policy and the need to eliminate hurdles so that people are able to return to school rather than being trapped in marginal work.

Krahn and Tanner note that current strategies such as the National Stay-in-School Initiative in Canada have focused on staying in school rather than returning. Recent policies, at least in Alberta, reflecting a preoccupation with fiscal constraint and balanced budgets, appear to have placed more obstacles in the way of those who attempt to return. A school administrator in rural Alberta

explained to me that because funds from Alberta Education are now dependent on the number of high school courses completed, those students who have dropped out of school and wish to return have acquired an additional risk factor in the eyes of school districts—the risk of not completing the course and thus not generating income for the school. A response by some schools is to require students to pay a fee in advance, a form of performance bond, which will be returned if the course is completed.

Earlier, Dehli analyzed the way three recent Canadian reports constructed a particular set of social problems in relation to education, training, and work and examined the influence that such reports have on political and institutional actions. Anisef and Andres direct the inquiry to the construction of early school leavers as a “national crisis” in Canada, which occurred while there was limited federal or provincial information about the actual number of early school leavers. They suggest that by sponsoring the National Stay-in-School Initiative, which happened to occur during a time of high unemployment for young Canadians, the federal government found a means of legitimizing this “serious threat to the future productivity of the Canadian economy” and “national embarrassment of 32%.” Advancing this multipronged strategy also provided a means for Ottawa to enter provincial territory—that of public education.

The 1990s was the decade that witnessed the National Stay-in-School Initiative in Canada. It was also a time when school districts were attempting to provide programs to an increasingly diverse student population and cope with reduced funding. What I witnessed during my involvement with two of the demonstration projects of this initiative was little talk about a national crisis, but much discussion about being motivated to take advantage of an additional sources of funding to provide support to students. A critical examination of the many demonstration projects funded during the years of the Initiative seems necessary.

One response by educational systems to at-risk students and early school leavers has been the development of alternative schools, such as “storefront” and “mall” schools, which have gained recent popularity in Alberta and elsewhere. Kelly draws from her research of “second-chance” or “continuation” schools to illustrate the two conflicting purposes of these schools: “providing a safety net for students versus providing a safety valve for the mainstream schooling system.” By revealing the cohesive nature of transfers into these alternative schools, combined with the lack of advanced courses required for entry into postsecondary institutions and the limited likelihood of returning to comprehensive schools, Kelly presents a compelling argument for rethinking whose interests such schools serve and what the policy implications are for educational systems.

One way school systems resist change is by ensuring that a safety valve is in place that removes those who tend not to fit into the traditional system. However, as LeCompte discovered while working for a school district on a Navajo reservation, even when the intent is to introduce school reforms, efforts can fail due to a variety of external pressures. Although many of these pressures are not, as LeCompte acknowledges, unique to this situation, much can be learned from her description of the attempts to ameliorate the cultural effects on non-

mainstream children by developing a culturally compatible curriculum—and also the reasons for failure.

The remaining three essays in Part II offer perspectives alternative to the dominant discourse. The writers present what could be described as views from the margins, attending also to the context in which these voices are heard.

This section begins with Roman noting that although many professionals speak about youth, the voices of youth tend not to be heard in the discourse. She argues that inclusion alone is not enough. Overcoming “institutional deafness” and enfranchising youth must begin by deconstructing and critiquing the official discourse and “moral panic” that defines youth as both the “cause of the nation’s problems and a symptom of the problematic nation” (p. 164). The important question she leaves us with is, Will we as researchers reinforce the familiar rhetoric, or are we “prepared to think and act against the grain”?

The argument posed by Roman in the preceding chapter shaped the lens through which I read Dei’s discussion of Black students in the Ontario public school system. Surprisingly, Dei refers to the 30% dropout rate—a popular miscalculation heard so often in the dominant discourse. An important contribution by Dei is that of providing an opportunity for the school experiences of marginalized youth to be recounted and their voices heard.

Something I have found challenging when engaging in research that focuses on the lived experiences of youth who have rejected (or have been rejected by) the school system is the tendency to focus only on their school experiences. It is essential that educational reform attend to the detrimental effects that school environments can have on some students, pushing them out of school. However, it is critical, I believe, that we do not merely shift from blaming the student (the victim) to blaming the school. Such a reductionist approach, which attempts to isolate single factors for leaving school, fails to provide remedies that come to terms with the complex and interactive relationship youth have with the school, the home, and the cultural and social communities in which they exist. I believe Dei’s reference to the importance of the role of community in the education of the child is also an important reminder that effective reform must consider a broader, more ecological approach.

Butterwick aptly concludes this section by examining critically the politics of interpreting the needs of people on the margin. Her analysis of how women’s needs were interpreted in a job reentry program for Native women illustrates the application of a political discourse-oriented approach, where attention is directed not only to needs, but also to whose interests dominate discussion about needs and the kind of “needs talk” that is produced.

The model Butterwick describes does provide useful advice for examining talk about the needs of groups marginalized from decision-making, be they Native women attempting to reenter the workplace or students who have left school before graduating. Such an approach, she asserts, serves both to reveal the multiple and contradictory interpretations of needs and also challenges those interpretations that define policy.

In the foreword, Fine wishes that the writers had also engaged each other in critical talk. I would also like to suggest that it would have been valuable to have teachers and other practitioners engage in a discussion with these writers

to explore their interpretations of what has been presented and to hear their voices.

This book offers valuable insights for those who wrestle with research issues, policy issues, or curriculum issues that relate to early school leavers. For those who believe they have already come to understand the dropout issue, my suggestion is: read this book! The contributions encourage a reframing of how we view at-risk and marginalized populations and critique the dominant discourse that has emerged and found its way into policy formation. The authors have done much to unpack issues of power, understanding, and voice. This is valuable for educators, but also for others who work with those situated on the margins of society.

I conclude by sharing one of the many personal reflections that this book has prompted. For the past three years the Alberta government has funded approximately 258 projects to pilot various early intervention strategies. One of the projects of the Early Intervention Initiative is located in a First Nations community in rural Alberta. The program was designed to reduce the dropout rate on the reserve, which is as high as 50% for elementary and 90% for high school students. Many strategies were devised to keep students in school: tutors were hired, home-school liaison personnel were recruited, and Elders were paired with children deemed at risk. Yet the single aspect of the program that has had the greatest effect was providing food for the students in the morning and at lunchtime. Over several months the attendance in the elementary school rose from 39% last year to 91% this year, fewer students come to school late, and grades have improved. Sometimes the search for remedies ignores the obvious—poverty and hunger.

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Teacher Activism in the 1990s. S. Robertson & H. Smaller (Eds.). Toronto, ON: James Lorimer & Company, 1996.

Reviewed by Calvin Fraser

Any book on teacher activism elicits a personal response from me. As a staff officer in a teacher professional association in Canada I am deeply involved in "teacher activism" in the 1990s. My organization was the first teachers' organization in Canada in which members faced direct attacks, including salary cuts, amalgamation of employing boards and lowest common denominator contracts, massive staff reductions by elimination of both positions and programs, and attacks on professional certification and evaluation. My professional work involves helping teachers with problems that have been created in part by the intense stress of a system in turmoil. I find few teachers who are knowledgeable about what is happening elsewhere, and many who feel

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trapped in seemingly local concerns. I come to a review of this book with a strong practical interest and a desire to learn from the experience of others.

The title of the book indicates a broad perspective. One editor, Susan Robertson, an Australian university professor who has taught at the University of Alberta, introduces the focus of the book as political activism. She suggests that the contributing authors see the influence of teachers in the development and maintenance of culture being challenged by those who would control the values of world culture. She outlines a thematic framework for the book that focuses on the impact on public education and teacher work from resituating nations in a global economy, reshaping the work force with reskilling or deskilling, and changing patterns of governance to minimize obligations of government while increasing regulatory control.

Editors Susan Robertson and Harry Smaller have collected articles to provide first a Canadian, then an international, perspective on teacher activism. What Robertson describes as “chapters” are articles by authors from British Columbia, Alberta, Ontario, and Nova Scotia that provide glimpses into aspects of the Canadian situation and from the United States, New Zealand, and Australia that explore a few international issues. The collection of ideas does not comprehensively cover the themes. Indeed, even linking topics in the introduction is overshadowed by Robertson’s strong political statements that identify the book as a partisan and somewhat myopic view of the political context of educational change. There is no pretense of a balanced perspective.

The book assumes commonalities in the functions of teachers’ associations, as well as common attacks on teachers’ associations, salaries, working conditions, intensified work levels, devaluing of teachers, and decreasing resources. As an involved reader I came away from the book satisfied that the authors understand the plight of teachers, if not always the response of teachers to that plight. The intended readership appears to include those who have not yet seen their local concerns from any larger perspective.

However limited, the insights of this book highlight the complexity of the mission of teachers’ associations and the diversity of roles played by those associations inside and outside Canada. Canadian teachers will learn from reading this book, which provides both an intellectual overview of teacher activism and a pragmatic look at the forces teachers are resisting. Widespread commonalities in attacks on public education and teachers are made visible. Each author adds a piece to the complex puzzle.

Kuehn’s perspectives on NAFTA and its impact on public education show the links between education and change in our culture. He includes the only discussion of National Education Association (NEA) actions in the book as he contrasts actions taken by teachers’ unions in Canada, Mexico, and the US. His article is an upbeat call for union-to-union cooperation and communication in creating a backlash to protect community life and public education. Soucek and Pannu present perspectives on the development of Alberta culture that both explain the fervor with which economic change has been advanced in Alberta and identify constraints on activism. They provide a reasonably broad overview of visible activism by the Alberta Teachers’ Association and suggest where it has succeeded or failed. Regrettably they offer advice for further action without more than a superficial exploration of the efforts that have

already been made in relation to their suggested actions. An article by Natale and Jolliffe and one by Coulter place Ontario school changes squarely in the broader context of global reform directed by industry. Natale and Jolliffe identify links between organized labor and teachers and explore some of the differences in values and objectives of business, teachers and labor. They encourage greater efforts at teacher education and healthy skepticism regarding new educational initiatives; including a specific rejection of outcomes-based education. Coulter's article, the most powerful in this section of the book, explores the disproportionate vulnerability of women to the changes. She argues convincingly that gender must be considered in the assessment of change. She explains the recognition of teachers that gender equity issues are part of a larger set of issues best challenged through solidarity in the teachers' associations. In this article the book comes closest to its challenge of seeing individuals seeking democratic outcomes. She urges strategic political action, making use of existing opportunities for resistance. Forbes identifies the extreme educational reform that was attempted in Nova Scotia and describes the determination of teachers who successfully forced their leadership to challenge and change proposed plans. Nonetheless, he sees this only as a defensive success that has slowed the damage being done to teacher work life and educational value for students. Therefore, he encourages continued strong action while credibility is high.

I came away from this section of the book with reinforced belief in the need for solidarity and renewed hope. Each of the authors saw possibilities for teachers to improve the situation for teachers and public education despite the uniformity of thought behind reform efforts across the country and the need to reinforce one another's defensive and proactive efforts.

The international dimension is informative, but missing important elements. There are, for example, no articles showing the efforts of teacher groups in Britain or the US to challenge or work with reform efforts. Not even an extension of Kuehn's references to the NEA is provided. Yet reforms are being imported to Canada from the US and Britain. Still, the articles provide both parallel and prophetic examples useful to Canadian teachers for assessing and choosing possible approaches to political activism.

Spaull identifies the dangers of direct political intervention as done by the Australian Education Union. Ineffective intervention there resulted in hostility on the part of election victors toward teachers who had opposed them. Robertson and Chadbourne describe the efforts in Australia to contain the influence of teachers' organizations, to devalue teachers' work, and to intensify teachers' work. They discuss the partial success of a defensive strategy involving the withdrawal of voluntary labor in a climate of strong antiunion sentiment from the public. However, they seem unsure of the union's ability to contribute in an increasingly globalized economy, which will require the union to educate an ill-informed and unsympathetic public. Jesson opens with reference to the influence of the World Bank and OECD in promoting the spread of reforms first applied in New Zealand. Using the experience of the PPTA, she shows the conflict unions face in balancing immediate economic needs and long-term political needs. Most important, she explains the influence of teachers' associations in the earlier corporate structure of government. She shows

how the dual role of the teachers' association as union and professional association has protected some of its influence, perhaps even permitting a victory for teacher ideals. Fowler, although American, provides the only European perspective as she shows how the always politically active Fédération de l'Éducation Nationale (FEN) in France has responded to threats in economic globalization from an intellectual base of belief in the union obligation to work for the betterment of society. She explains the internal restructuring of the FEN to meet the challenges, followed by organizational links with other groups with common objectives, as well as direct action through demonstrations and strikes. She concludes that there may be much for other groups to learn from the FEN.

As a reader I was satisfied that *Teacher Activism in the 1990s* expanded horizons for me intellectually and as a participant in the educational change process. Its positive focus stimulates thought about possibilities for action. Its limitations provide room for a follow-up. By helping teachers place their situation in a broad context, this book can help them avoid isolating themselves or being isolated by outside forces, thus reducing their chances to advance teacher perspectives on education.

Inside Canadian Universities: Another Day at the Plant. Randle W. Nelson (Ed.). Kingston, ON: Cedar Creek Publications, 1997, 211 pages.

Reviewed by *George Buck*

Ever since the founding of universities in 13th-century medieval Europe, there have been works analyzing the purpose, content, and directions of universities. John Henry Cardinal Newman, writing in the mid-19th century, contended that although universities were institutions based initially on religious and philosophical inquiry into things written and things ethereal, the university had evolved and should be, "a place of *teaching universal knowledge* [original italics]. This implies that its object is, on the one hand, intellectual, not moral; and, on the other, that it is the diffusion and extension of knowledge rather than the advancement" (Newman, 1852/1927, p. 3). By the early 20th century, when universities in Canada first began to grow and proliferate, Abraham Flexner took North American universities in general to task as he envisaged the ideal university as being concerned not only with dissemination of knowledge, but also with its advancement, "an institution consciously devoted to the pursuit of knowledge, the solution of problems, the critical appreciation of achievement, and the training of men at a really high level" (Flexner, 1930/1994, p. 42). At the same time, Karl Jaspers considered the ideal university to be concerned not with general boilerplate statements such as "a community of scholars in search of the truth," but rather with the inextricable link between research and teaching, the altering of culture [*Bildung*], and the communication and advancement of knowledge through debate and collaborative

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research (Jaspers, 1923; Walters, 1996). From this matrix of earlier observation we can compare and contrast recent works on universities.

There are comparatively few books concerned with the status and development of Canadian universities exclusively, and so the arrival of the compendium edited by Randle Nelson is a timely address to this deficiency. The works of 12 authors are represented, and all are located at Canadian universities, with each geographical region being represented, although none is Francophone. Not all the authors are from larger, *research* universities, and so some of the issues and problems peculiar to smaller and remote institutions are featured in several of the articles.

The unique conditions of the *frontier* Lakehead University in Thunder Bay is described vividly in contrast to concerns of universities in more populated areas. Lest we forget the vast size of this country, Nock points out that the nearest university to Lakehead is in Winnipeg, some 700 kilometers to the west, while the nearest Ontario university is Laurentian, in Sudbury, about 1,000 kilometers to the east. The problems of a small and scattered population supporting an expensive institution of higher learning are revealed, as are the difficulties of establishing and maintaining inter-institution collaboration because of Lakehead's isolation. Such description of isolated universities sheds light onto why growth in such locations is often difficult and slower than in other areas of Canada, where the population base is larger, and where sister universities are sometimes within commuting distance.

The development of *edubusiness* and its ramifications for teaching and the future of Canadian universities is addressed in several articles, each with a different focus on the concept. For several years now the mantra chanted by many Canadian, and no doubt American, university administrators, is that universities must follow a so-called business model to be more *productive* and to better meet the needs of the *customers*. As Locke states, "The rise of edubusiness and the decline of academic objectives is documented by the nature of many university publications which are devoted to in-house publicity and management empire building rather than the mission of a university" (p. 14). He sees the rise of edubusiness as a dangerous development in Canadian universities that, unchecked, may lead to the stifling of some avenues of inquiry, sentiments echoed and expanded by Nelson. Tan notes that the eagerness of university administrations and individual professors to obtain external funding is so great that what is selected as a research topic is often determined by the interests of funding agencies, businesses, and other groups outside the university. This raises the question of whether the university should pander to whatever dominant forces exist in society, or if they should engage in pursuits that may or may not have an immediate or obvious practical benefit. Although some administrators might consider views critical of edubusiness to be heresy, it is important for administrators, politicians, and especially the general public, to remember that universities do not create a *product*, as does a bagel machine, but universities consist of people with varied interests and views working with other people who also possess varied views, an involved and sometimes slow process in comparison with an assembly line. In this regard the book addresses the issue well.

Another theme considered is how students and staff, especially those from ethnic, gender, sexual orientation, and racial minorities have experienced a "chilly climate" at Canadian universities, mainly through wanton discrimination, often in the form of "academic retaliation." Although the main emphasis is on minorities, Roy makes the important point that "It may not matter who you are, but rather, the kind of ideas you espouse which will make the learning environment a cold one" (p. 132). Few academics would deny that there has been marginalization of groups and individuals who advance views contrary to prevalent perceptions and ideas. Nevertheless, many examples are cited to show how, in spite of words to the contrary, many Canadian universities are moving slowly in making the learning environment welcome to all individuals. Unfortunately, some of the articles lose the focus on the razor's edge separating academic freedom from conformity to social ideals, and present an interesting, if not scary, dilemma. Heald, for example, states, "More serious, however, are the ways academic freedom is used to defend the right to continue to teach those forms of academic discourse that perpetuate and justify the centering of white, western, masculinist thinking" (p. 116). Can there be "academic freedom" if it consists only of ideas and research that are congruent with what is, at the moment, socially acceptable? What about those who either disagree with such views, or propose something else? Should they be silenced and excluded? Was it appropriate for the University of California to dismiss Edward Tolman (a professor of psychology) during World War II because he refused to sign a loyalty oath contending that it was an infringement on academic freedom (Hergenhahn & Olson, 1997)? Similarly, was the defense by the American Civil Liberties Union of the avowed fascist professor of Classics Revilo P. Oliver an endorsement of fascism? Although I deplore any form of discrimination, I also deplore the restriction or corruption of a freedom, no matter how seemingly appropriate or noble the cause. Whether my criticism is agreed with or not, whether I am male or female, black, white, red, green, or a Jew, Christian, or Muslim, is irrelevant to academic freedom; everyone in the university community must be permitted their views.

In a related vein, a general impression in some of the articles is that until recently Canadian universities excluded women and minority groups. Although this was, unfortunately, true in many English and European universities, most Canadian universities established after the turn of the century did not bar women students, nor did they conspire to exclude women from professorial positions. For instance, a perusal of Johns (1981) reveals that several women were in the first graduating class at the University of Alberta, 1912, and that there were several women faculty members. Although overstating a point may intensify emotion associated with the issue, such an approach also tends to erode credibility, and this is, ultimately, counterproductive.

Descriptions of different cultural traditions related to teaching and learning are presented. The point is made that knowledge of different orientations and methods than our own can help us to improve our understanding of others, and perhaps effect an improvement to our teaching. Equally important are the points made by Litner, Rossiter, and Taylor that clinging to one particular model of instruction not only marginalizes many individuals and groups in a

class, but it also presents teaching staff in a surreal way, where students do not perceive them as human beings similar to themselves.

The book concludes with a critical view of electronic delivery of distance education. Seen by some to be the new *revolution* in university teaching, Nelson cautions us to be somewhat circumspect, as there is a tendency of such technology to reduce education to a minimalist process that “involves teaching to the programmed ‘right answer’” (p. 206). Moreover, Nelson contends that “what is missing in today’s university education at a distance is the character and interaction of neighborhood, of community at its best” (p. 207). Perhaps this observation explains why earlier technological innovations adapted to distance education did not have the effect that was envisaged. In 1932, for example, the president of Colgate University said of the arrival of electronic television and its use as an educational medium, “The question really becomes whether in the future colleges as formal institutions will be necessary, and if the attendance of classes in any one place will not become as obsolete as the buggy of twenty-five years ago” (Dunlap, 1932, p. 261). The failure of television to effect such a change in over 60 years supports Nelson’s caution that we should not see every new technology as a panacea for distance delivery of education.

Inside Canadian Universities: Another Day at the Plant, does an admirable job of reflecting the current state of most Canadian universities, and it presents views on several current, and controversial issues that will shape and transform Canadian universities into the new millennium.

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